FINAL REPORT
Former York Naval Ordnance Plant
1425 Eden Road, Springettsbury Township
York, Pennsylvania

Prepared for:

Former York Naval Ordnance Plant Remediation Team

November 3, 2023

Prepared by:

Groundwater Sciences Corporation
2550 Interstate Drive, Suite 303
Harrisburg, Pennsylvania 17110

FINAL REPORT
Former York Naval Ordnance Plant
1425 Eden Road, Springettsbury Township
York, Pennsylvania

Prepared for:

Former York Naval Ordnance Plant Remediation Team

November 3, 2023

Prepared by:

Groundwater Sciences Corporation

J. Neil Ketchum, P.G.
Senior Associate
Groundwater Sciences Corporation
November 3, 2023

Christopher D. O'Neil, P.G.
Senior Hydrogeologist
Groundwater Sciences Corporation
November 3, 2023

Table of Contents

EXECUTIVE SUMMARY 1
1 INTRODUCTION AND BACKGROUND 6
1.1 Site Description 7
1.2 Remedial Investigations and Interim Remediation Activities 8
1.3 Soils Risk Assessment Findings 9
1.4 Groundwater Risk Assessment Findings 10
1.5 Cleanup Plan 11
2 LIST OF CONTACTS 13
3 SUMMARY OF fYNOP REMEDY 14
3.1 Waiver Request 14
3.2 Implementation of Cleanup Plan Remedy 15
3.2.1 Removal of Direct Contact Exposure Prevention Capped Areas 15
3.2.2 Addition of Direct Contact Exposure Prevention Capped Areas 16
3.2.3 Removal of Infiltration Reduction Capped Areas 16
3.2.4 WPL Groundwater Extraction System Operation 17
4 ATTAINMENT DEMONSTRATION 19
4.1 Soil Attainment 19
4.1.1 Statewide Health Standard Attainment for Soil 20
4.1.1.1 Evaluation of Statewide Health Standard Medium-Specific Concentration Changes 20
4.1.2 Site-Specific Standard Attainment for Soil 21
4.1.2.1 Evaluation of Regional Screening Level Changes 21
4.1.3 Evaluation of Soil Data Collected After Soils Risk Assessment 22
4.1.3.1 Statewide Health Standard Attainment for Data Collected Subsequent to the Soils Risk Assessment 22
4.1.3.2 Site-Specific Standard Attainment for Data Collected Subsequent to the Soils Risk Assessment 23
4.1.4 Engineering Controls for Soil 23
4.1.4.1 Caps to Eliminate Direct Contact Exposure and Reduce Infiltration 24
4.1.4.2 West Campus Vapor Barrier 25
4.1.5 Institutional Controls for Soil 25
4.2 Groundwater Attainment 25
4.2.1 Groundwater Attainment Sampling Scope 27
4.2.2 Groundwater Attainment Sampling Results 28
4.2.3 Groundwater Fate and Transport and Statistical Analysis 28
4.2.3.1 Conceptual Site Model Summary 29
4.2.3.2 Spatial Plume Stability Analysis 30

4.2.3.3 Groundwater Concentration Trend Analysis 31
4.2.4 Engineering Controls for Groundwater 33
4.2.4.1 SPBA Groundwater Extraction and Treatment System 33
4.2.4.2 WPL Groundwater Extraction and Treatment System 33
4.2.4.3 West Campus Vapor Barrier 34
4.2.5 Institutional Controls for Groundwater 34
4.2.6 Groundwater Attainment Conclusions 34
4.3 Surface Water Attainment 35
4.3.1 Surface Water Evaluation in the Groundwater Risk Assessment 35
4.3.2 Surface Water Quality Data 36
4.3.2.1 Scope of Surface Water Sampling and Analysis 36
4.3.2.2 Precipitation and Hydrology Results 37
4.3.2.3 Data Representativeness 38
4.3.2.4 Analytical Results 38
4.3.2.5 Compliance Determination 39
4.3.2.6 Summary 39
4.4 RCRA Corrective Action Complete with Controls and Closure of SWMUs and AOCs .. 40
5 POST-REMEDIATION CARE PLAN 42
5.1 Engineering Controls 42
5.1.1 Monitoring and Maintenance of Caps 43
5.1.2 Monitoring and Maintenance of SPBA Groundwater Extraction and Treatment System 43
5.1.3 Monitoring and Maintenance of WPL Groundwater Extraction and Treatment System 44
5.1.4 Monitoring and Maintenance of Vapor Barrier 46
5.2 Institutional Controls 46
5.2.1 Assessment of Non-Residential Land Use 46
5.2.2 Assessment of Continued Non-Use of Groundwater 47
5.2.3 Assessment of Potential Vapor Intrusion into Future Inhabited Spaces 47
5.2.4 Intrusive Activity and Waste Management Limitations and Controls 48
5.2.5 Periodic Notification Regarding Potential Exposure to Utility Workers 48
5.3 Groundwater Monitoring 48
5.4 Surface Water Monitoring 49
6 COOPERATIVE AGREEMENTS OF THIRD PARTIES 51
7 COMMUNITY INVOLVEMENT AND PUBLIC COMMENTS 52
7.1 Public Information and Involvement Plan 52
7.2 Municipal and Public Notifications for Act 2 Submittals 53
8 SIGNATURES 55
9 REFERENCES 56

Tables

Table 1.2-1	Summary of SWMUs and Areas of Concern
Table 2.1-1	List of Contacts
Table 3.1-1	Summary of Remedy Goals and Metrics from Site-Wide Cleanup Plan
Table 4.0-1	Remediation Standards Attained for Substances in Soil
Table 4.0-2	Remediation Standards Attained for Substances in Groundwater
Table 4.1-1	Substances in Soils Risk Assessment Affected by Medium-Specific Concentration and Regional Screening Level Changes
Table 4.1-2	Soil Data Collected After Soils Risk Assessment – East Campus 0 to 2 Feet Below Ground Surface
Table 4.1-3	Soil Data Collected After Soils Risk Assessment – East Campus 0 to 15 Feet Below Ground Surface
Table 4.1-4	Soil Data Collected After Soils Risk Assessment – West Campus 0 to 15 Feet Below Ground Surface
Table 4.1-5	Screening of Soil Data – East Campus 0 to 2 Feet Below Ground Surface
Table 4.1-6	Screening of Soil Data – East Campus 0 to 15 Feet Below Ground Surface
Table 4.1-7	Screening of Soil Data – West Campus 0 to 15 Feet Below Ground Surface
Table 4.2-1	Physical Well Data Table
Table 4.2-2	Groundwater Attainment Sampling Summary
Table 4.2-3	Groundwater Attainment Sample Analytical Data – Volatile Organic Compounds
Table 4.2-4	Groundwater Attainment Sample Analytical Data – Total and Available Cyanide (MW-2)
Table 4.2-5	Groundwater Attainment Sample Data Summary (Group 1 Substances)
Table 4.2-6	Groundwater Attainment Sample Data Summary (Group 2 Substances)
Table 4.2-7	Groundwater Attainment Sample Concentration Trend Analysis Results (Group 1 Substances)
Table 4.2-8	Groundwater Attainment Sample Concentration Trend Analysis Results (Group 2 Substances)

Table 4.3-1	Water Quality Criteria Application – Surface Water Sampling Locations
Table 4.3-2	PADEP Surface Water Quality Criteria
Table 4.3-3	Monthly Surface Water Monitoring Information
Table 4.3-4	Stream Discharge Statistics for Codorus Creek
Table 4.3-5	Precipitation Data for York Airport Weather Station
Table 4.3-6	Surface Water Analytical Data Summary – Volatile Organic Compounds
Table 4.3-7	Monthly Surface Water Sampling Results
Table 5.3-1	Master Summary of Agreements

Figures

Figure 1.0-1	fYNOP Location Map
Figure 1.0-2	MMRP Areas
Figure 1.1-1	fYNOP Area Designations
Figure 1.1-2	Land Use Areas
Figure 1.2-1	Solid Waste Management Units and Areas of Concern
Figure 1.5-1	Technical Impracticability (TI) Areas for Groundwater
Figure 3.1-1	Waiver Request Areas
Figure 3.1-2	Direct Contact Cap Area from Site-Wide Cleanup Plan
Figure 3.1-3	Areas Where Direct Contact Cap in Site-Wide Cleanup Plan is Not Being Implemented
Figure 3.1-4	Additions to Direct Contact Cap in Site-Wide Cleanup Plan
Figure 3.1-5	Infiltration Reduction Cap Area from Site-Wide Cleanup Plan
Figure 3.1-6	Areas Where Infiltration Reduction Cap from Site-Wide Cleanup Plan is Not Being Implemented
Figure 4.1-1	Soil Samples from Soils Risk Assessment with Substances Affected by Regulatory Level Changes

Figure 4.2-1	Groundwater Attainment Sampling Locations
Figure 4.2-2	Overview of Fate and Transport Mechanisms (Non-Carbonate Bedrock Setting)
Figure 4.2-3	Overview of Fate and Transport Mechanisms (Carbonate Bedrock Setting)
Figure 4.2-4	Conceptual Model of DNAPL Fate and Transport in a Karst Aquifer
Figure 4.2-5	Plume Stability Analysis Map
Figure 4.3-1	Surface Water Monitoring Locations
Figure 4.3-2	Codorus Creek Discharge – USGS Gaging Station No. 01575500 – Codorus Creek Near York, PA (Upstream of fYNOP)
Figure 4.3-3	Codorus Creek Discharge – USGS Gaging Station No. 01575585 – Codorus Creek at Pleasureville, PA (Downstream of fYNOP)
Figure 4.3-4	USGS York and Pleasureville Gaging Station Locations
Figure 5.1-1	Monitoring Locations for SPBA Groundwater Extraction System Performance

Plates

Plate 1.2-1	Groundwater Elevation Contour Map for September 22, 2022
Plate 4.1-1	Soil Samples Collected Outside of Capped Areas After Soils Risk Assessment (2009 to Present)
Plate 4.1-2	Direct Contact Cap Areas

Appendices

Appendix A	Draft Environmental Covenants for the East and West Campus Properties
Appendix B	Soils RA Screening Tables
Appendix C	Construction Details for Caps
Appendix D	Construction Details for Vapor Barrier and Vapor Intrusion Assessment Report
Appendix E	Groundwater Attainment Sampling Results by Area at fYNOP
Appendix F	Groundwater Concentration Trend Analyses Outputs and Plots
Appendix G	Groundwater Concentration Trend Analysis Results by Area at fYNOP
Appendix H	Surface Water Sampling Documentation*
Appendix I	Laboratory Analytical Reports for Surface Water Samples*
Appendix J	Post-Remediation Care Plan
Appendix K	Public Information and Involvement Plan (PIIP)
Appendix L	Municipal and Public Notice Documentation

** - in portable document format (PDF) on the fYNOP public website at https://yorksiteremedy.com*

LIST OF ACRONYMS AND ABBREVIATIONS

11DCA	1,1-dichloroethane
11DCE	1,1-dichloroethene
12DCA	1,2-dichloroethane
124TMB	1,2,4-trimethylbenzene
26DNT	2,6-dinitotoluene
µg/L	micrograms per liter
Act 2	Land Recycling and Environmental Remediation Standards Act
AOC	Area of Concern
ARAR	applicable, or relevant and appropriate requirement
ARM	ARM Group, Inc.
AWQC	applicable water quality criteria
bgs	below ground surface
CAO	corrective action objective
CC	confidence coefficient
cfs	cubic feet per second
cis12DCE	cis-1,2-dichloroethene
Cleanup Plan	Site-Wide Cleanup Plan
COC	constituent of concern
COPC	chemicals of potential concern
CPA	Central Plant Area
CSM	conceptual site model
CTE	central tendency exposure
CVOC	chlorinated volatile organic compound
DCNR	Department of Conservation and Natural Resources
DMR	Discharge Monitoring Report
DNAPL	dense non-aqueous phase liquid
DQA	data quality assessment
EA	EA Engineering, Science, and Technology, Inc., PBC
ERLC	Eden Road Logistics Center
ESP	Eastern Site Perimeter
FDRTC	Final Decision and Response to Comments (EPA ID No. PAD001643691)
FIRST	Facilities Investigation Remedy Selection Track
FSP	Field Sampling Plan
fYNOP	former York Naval Ordnance Plant
fYNOP Team	fYNOP Remediation Team
GSC	Groundwater Sciences Corporation
Harley-Davidson	Harley-Davidson Motor Company, Inc.
HI	hazard index
HTG	Hydro-Terra Group
HQ	hazard quotient
ILCR	incremental lifetime cancer risk
Levee Area	Codorus Creek Levee Area
LUA	Land Use Area
MCL	maximum contaminant level

MDL	method detection limits
mg/kg	milligrams per kilogram
MMRP	Military Munitions Response Program
MNA	monitored natural attenuation
MSC	medium-specific concentration
MTBE	methyl tertiary-butyl ether
NBldg4	North Building 4
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NIR	Notice of Intent to Remediate
NP York	NP York 58, LLC
NPA	North Plant Area
NPBA	Northern Property Boundary Area
NPDES	National Pollutant Discharge Elimination System
NSP	Northern Site Perimeter
PADEP	Pennsylvania Department of Environmental Protection
PaGWIS	Pennsylvania Groundwater Information System
PAH	polycyclic aromatic hydrocarbon
Part 2 SRI	Part 2 Supplemental Remedial Investigation Groundwater Report
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PIIP	Public Information and Involvement Plan
PP-FR	Proposed Plan-Final Remedy
PRCP	Post-Remediation Care Plan
QAPP	Quality Assurance Project Plan
Q_h	harmonic mean flow
QL	quantitation limit
RA	Risk Assessment
RCRA	Resource Conservation and Recovery Act
RL	reporting limit
RME	reasonable maximum exposure
RSL	regional screening level
SAIC	Science Applications International Corporation
SCSA	South-Central Site Area
SHS	Statewide health standard
SPA	South Plume Area
SPBA	Southern Property Boundary Area
SRBC	Susquehanna River Basin Commission
SRI	Supplemental Remedial Investigation
SSS	site-specific standard
SWMU	Solid Waste Management Unit
TCA	1,1,1-trichloroethane
TCE	trichloroethene
TDS	total dissolved solids
TGM	Land Recycling Program Technical Guidance Manual
TI	Technical Impracticability
USEPA	United States Environmental Protection Agency

USGS	United States Geological Survey
VC	vinyl chloride
VOC	volatile organic compound
WPL	West Parking Lot

EXECUTIVE SUMMARY

This Final Report documents attainment of selected remediation standards under the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) for the 232-acre former York Naval Ordnance Plant (fYNOP or Site) located in Springettsbury Township, York County, Pennsylvania. It addresses both Pennsylvania Department of Environmental Protection (PADEP) and United States Environmental Protection Agency (USEPA) obligations under the One Cleanup Program, provides information to demonstrate attainment of a combination of the Statewide health standard (SHS) and the Site-Specific Standard (SSS) for soil and the SSS for groundwater at the Act 2 Site, and seeks cleanup liability protection pursuant to Section 501 of Act 2. This Final Report also satisfies the requirements of Final Decision and Response to Comments for fYNOP – USEPA ID No. PAD001643691 (FDRTC) – and demonstrates completion of "Corrective Action Complete With Controls" pursuant to the Resource Conservation and Recovery Act (RCRA) for the Site and all media of concern except soil contamination, munitions, or explosives of concern in the East Campus Military Munitions Response Program (MMRP) Cleanup Area that will be addressed separately.

This Final Report demonstrates full satisfaction of all elements of the Final Remedy in the Site-Wide Cleanup Plan (Cleanup Plan) and includes the draft Environmental Covenants to implement the Final Remedy and its engineering and institutional controls.

Past waste disposal practices, and spills and leaks that occurred during manufacturing operations conducted from the 1940s to the early 1970s impacted soil and groundwater quality at fYNOP. Environmental investigations beginning in the 1980s discovered chlorinated volatile organic compounds (CVOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), petroleum hydrocarbons, metals, and cyanide in soils, groundwater, subsurface vapor, and surface water on fYNOP. Since that time, natural processes and interim remedial measures have resulted in the significant reduction of the mass of these chemicals at the Site. However, due to Site conditions and the nature of the contaminants, groundwater restoration to cleanup standards is not practicable in two areas of the Site identified "Technical Impracticability" (TI) Areas (TI Area 1 and TI Area 2).

The selected Final Remedy addresses each media of concern at the fYNOP (soils, groundwater, surface water, and subsurface vapor). The remedy consists of a combination of engineering controls,

institutional controls, and other remedial actions and obligations. Engineering controls include groundwater extraction and treatment, caps, and vapor mitigation. Institutional controls consist of activity-and-use limitations and notifications that prohibit or restrict residential land use, groundwater use, intrusive activities (e.g., excavation) in specified areas, building construction without vapor intrusion evaluation and/or mitigation, and control of soil and waste generated during earthwork activities. Monitored natural attenuation (MNA) will be used for the USEPA corrective action objective (CAO) of resource restoration for groundwater outside of TI Area boundaries. The estimated duration of each remedy component is greater than 30 years.

A Soils Risk Assessment (RA) completed in 2012 and Groundwater RA completed in 2018 reported that the Site poses no unacceptable risk to human health or the environment given the data analyzed, assumptions used, and regulatory standards in effect at the time. Therefore, soil and groundwater attainment demonstrations in this Report include an assessment to verify that current Site conditions and regulatory standards are consistent with the baseline conditions used in the RAs.

Both Soils and Groundwater RAs assumed certain existing engineering controls in place at the Site to reach its conclusion of "no unacceptable risk." These controls include caps (asphalt, soil, concrete, stone, rip-rap, structure slabs, and liners [clay, geomembrane, and geotextile]) for soil, operation of the Southern Property Boundary Area (SPBA) and West Parking Lot (WPL) groundwater extraction and treatment systems for groundwater and surface water when necessary, and use of a vapor barrier installed beneath the concrete slab of the Eden Road Logistics Center (ERLC) warehouse building on the West Campus for subsurface vapor. Verification of engineering controls and an assessment of the results of laboratory analyses of the soil and groundwater samples collected since completion of the RAs was necessary to confirm the conclusions of both RAs.

The demonstration of attainment for soil includes verification that the necessary engineering components are in place to prevent direct contact with contaminated soil and waste, conditions assumed in the Soils RA still exist, sufficient institutional controls are included in covenants, and that Post-Remediation Care Plan (PRCP) obligations are performed.

Two performance-type caps were proposed in the Cleanup Plan: direct contact and infiltration reduction. Cap area inspection confirmed that over 98% of areas proposed for direct contact capping in the Cleanup Plan are currently covered with acceptable cap materials. Capping of the identified

non-capped areas will not be required to attain or maintain the selected remediation standards due to the obligation that intrusive activity and waste management limitations and controls, including worker health and safety plans, be in place prior to earth disturbance in these areas.

The Cleanup Plan identified caps that prevent direct contact as having an additional benefit of limiting infiltration and reducing potential leaching of constituents of concern (COCs) from soil and waste to groundwater. Infiltration reduction caps proposed in the Cleanup Plan are located entirely on the West Campus and are coincident with caps preventing direct contact. Cap area inspection identified a few spatially limited, uncapped areas comprising less than 13% of the total proposed capped area for infiltration reduction. However, caps in these identified areas are not included in the Final Remedy because most are located within the boundary of TI Area 1 where attainment of the groundwater cleanup standard is not practicable. Therefore, additional infiltration reduction caps are not necessary to attain or maintain the selected remediation standards and/or the Final Remedy.

The evaluation of analytical data for soil samples collected outside capped areas after Soils RA publication identified two spatially limited areas with concentrations that are not consistent with Soils RA conclusions. However, these areas are currently capped with acceptable materials and have been incorporated into the remedy to prevent direct contact exposure to impacted soil by pathway elimination. Therefore, attainment of the SHS and SSS is demonstrated for the identified substances in the recent soil data and the Final Remedy and the conclusion in the Soils RA is not affected.

The demonstration of attainment for groundwater included confirming that current chemical concentrations in groundwater are generally consistent with those used in the Groundwater RA, Environmental Covenants with engineering and institutional controls are in place, statistical trend analysis for chemical concentrations in Site groundwater are acceptable, fate and transport evaluation demonstrates plume stability, and PRCP obligations are implemented to demonstrate the continued effectiveness of the remedy. PRCP obligations include groundwater monitoring to gauge MNA progress to meet the USEPA aquifer restoration cleanup goal outside of TI areas.

The Groundwater RA concluded that groundwater poses no adverse risk to human health or the environment given the assumptions used (including under WPL extraction system pumping and non-pumping conditions). Groundwater exposure pathways and exposure factors have not changed

since the Groundwater RA. The groundwater evaluation for Act 2 attainment and Final Remedy compliance to verify these conclusions are as follows:

- Comparison of the historical COC plume areal extent at the time of the Groundwater RA with current COC data indicates a generally stable or shrinking plume.
- Statistical evaluation of concentration trends in groundwater attainment samples confirms that Site COC concentrations are generally decreasing Site-Wide.
- In-place engineering controls (vapor barrier beneath ERLC warehouse and SPBA groundwater extraction and treatment system) are currently operating as designed.
- Institutional controls are implemented to restrict groundwater use, prohibit residential land use, and manage intrusive activity (excavation) in specified areas.

The Groundwater RA concluded that surface water poses no adverse risk to human health with or without the WPL groundwater extraction system operating. Surface water monitoring of Codorus Creek demonstrates that operation of the WPL groundwater extraction system is not currently necessary to meet applicable water quality criteria (AWQC) in Codorus Creek. However, the WPL groundwater extraction system will remain in place as an available engineering control should its operation be necessary to maintain compliance with AWQC. Continued monitoring of surface water quality in Codorus Creek with the WPL groundwater extraction system off will be conducted in accordance with the PRCP.

The PRCP in this report identifies activities necessary to attain and maintain the selected remediation standard under 25 Pa. Code Chapter 250.411(d) and 250.204(g) of the Act 2 Regulations and the USEPA FDRTC. The PRCP includes the following activities for the Site:

- Monitoring and maintenance of caps;
- Monitoring and maintenance of the SPBA groundwater extraction system;
- Monitoring groundwater and surface water quality and reporting that demonstrates the continued effectiveness of the remedy and reporting of monitoring results and analyses;
- Potential future monitoring and maintenance of the WPL groundwater extraction and treatment system (if necessary);
- Monitoring and maintenance of vapor barrier;

- Assessment of non-residential land use;
- Assessment of continued non-use of groundwater;
- Assessment of potential vapor intrusion into future inhabited spaces;
- Implementation of intrusive activity and waste management limitations and controls (a.k.a., soil management plan);
- Periodic notification regarding potential exposure to utility workers;
- Maintaining records of monitoring, sampling, analysis, and measures to correct potential nonconformity conditions; and
- Operating and maintaining the controls and submission of proposed changes.

Documentation of ongoing post-remediation care activities will be provided to PADEP and USEPA in annual PRCP reports.

1 INTRODUCTION AND BACKGROUND

The Final Report documents attainment of selected remediation standards for regulated substances in soil and groundwater under the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) at the former York Naval Ordnance Plant (fYNOP or Site) located in Springettsbury Township, York County, Pennsylvania (**Figure 1.0-1)**. It also addresses corrective action requirements under the Federal Resource Conservation and Recovery Act (RCRA). Assessment and remediation activities conducted at the Site have been consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This report and the included draft Environmental Covenants and Post-Remediation Care Plan (PRCP) are intended to facilitate both the post-remediation care requirements under Act 2 and the implementation of the Final Decision and Response to Comments for fYNOP – USEPA ID No. PAD001643691 (FDRTC) prepared by United States Environmental Protection Agency (USEPA) in February 2020. The Final Report is submitted under the One Cleanup Program established by a Memorandum of Agreement between USEPA Region 3 and Pennsylvania Department of Environmental Protection (PADEP), dated April 21, 2004, into which the Site was enrolled on February 7, 2005.

The FDRTC sets forth USEPA's Corrective Action Objectives (Section 4) and the selected Final Remedy (Section 5) for each media of concern at the fYNOP (soils, groundwater, surface water, and subsurface vapor), as well as additional requirements that are not specific to a particular media of concern. The FDRTC provides that USEPA "will implement the Final Remedy for the Facility through an enforceable mechanism such as a permit, order, and/or an Environmental Covenant recorded in the chain of title for the facility pursuant to the Pennsylvania Uniform Environmental Covenants Act."

This Final Report is generally organized following the suggested outline for a Final Report submitted under the Act 2 site-specific standard (SSS) in the PADEP Land Recycling Program Technical Guidance Manual (TGM) (PADEP, 2021) and seeks liability protection pursuant to Section 501 of Act 2.

Consistent with the One Cleanup Program, while the Final Report is prepared in a form consistent with Act 2, it also serves as demonstration of completion (excluding only remediation of soils in the Military Munitions Response Program [MMRP] area on the East Campus shown on **Figure 1.0-2**

[MMRP Cleanup Area]) of Final Remedy implementation under the FDRTC and, therefore, also requests a "Corrective Action Complete With Controls" determination by USEPA pursuant to RCRA for the Site and all media of concern.[1] This Final Report provides information to demonstrate attainment of a combination of the Statewide health standard (SHS) and the SSS for soil and the SSS for groundwater with pathway elimination being the primary component of the remediation under the SSS. However, this report does not address soil contamination, munitions, or explosives of concern in the East Campus MMRP Cleanup Area. The remedy for soil contamination, munitions, and explosives of concern in the MMRP Cleanup Area, as described in the MMRP Cleanup Plan (EA Engineering, Science, and Technology, Inc., PBC [EA], 2019) and the FDRTC, was approved by PADEP and USEPA in February 2020 and is ongoing. Please note that this Final Report does address soil contamination in the West Campus MMRP Area shown on **Figure 1.0-2** and Site-Wide groundwater contamination, including groundwater beneath the MMRP Areas.

1.1 Site Description

The 232-acre fYNOP property was divided into the East and the West Campus properties in June 2012. The East Campus contains an active motorcycle manufacturing facility owned by Harley-Davidson Motor Company, Inc. (Harley-Davidson), the successor by merger to Harley-Davidson Motor Company Operations, Inc. In July 2020, a Corrective Deed was executed for the East Campus property that corrected its size from 172 to 174 acres. The 58-acre West Campus, owned by NP York 58, LLC (NP York), contains the Eden Road Logistics Center (ERLC), a 775,000-square-foot warehouse constructed in 2016.

Figure 1.1-1 shows that U.S. Route 30 and industrial/commercial properties border the Site on the south and an industrial/commercial property, a railroad line, uninhabited wetland/wooded areas, the

[1] Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) were identified at the Site and are listed in Table 1.2-1. Certain SWMUs were previously certified as closed, and they are identified on Table 1.2-1. The remaining SWMUs and AOCs located outside of the MMRP Cleanup Area are fully addressed through this corrective action process rather than certification of closure of each individual SWMU and AOC. As such, this Final Report certifies closure of the remaining SWMUs and AOCs identified in Table 1.2-1, outside of the MMRP Cleanup Area. The closure of the SWMUs located within the MMRP Cleanup Area will be addressed through the submission of a separate final report/corrective action completion for soils in the MMRP Cleanup Area.

Codorus Creek levee, and Codorus Creek border the Site on the west. Residential properties are located along the north, east, and southeast sides of the Site.

Under Act 2 and the associated 25 Pa. Code Chapter 250 Regulations, the term "site" is defined as:

> *The extent of contamination originating within the property boundaries and all areas in close proximity to the contamination necessary for the implementation of remediation activities to be conducted under the act.*

The term "Site" in this report refers to the fYNOP. The term "Act 2 Site" is used when referencing the area meeting the definition of "site" under Act 2. For soil, there are two Act 2 Sites. They are the East Campus property (excluding the MMRP Cleanup Area) and the West Campus property. For groundwater, the Act 2 Site is defined by the maximum extent of the Land Use Areas (LUA) defined in the Groundwater Risk Assessment. **Figure 1.1-2** shows the two soil and the groundwater Act 2 Sites.

1.2 Remedial Investigations and Interim Remediation Activities

Past waste disposal practices, and spills and leaks that occurred during manufacturing operations conducted from the 1940s to the early 1970s impacted soil and groundwater quality at fYNOP. The conceptual site model (CSM) presented in the Part 2 Supplemental Remedial Investigation Groundwater Report (Part 2 SRI) (Groundwater Sciences Corporation [GSC], 2018a) describes the nature and occurrence of residual dense non-aqueous phase liquid (DNAPL) in the aquifer from these leaks, spills, and disposal practices. The geologic setting, composed of a solution-prone limestone in the west and fractured quartzite in the east, combined with the recalcitrant nature of the contaminants, makes restoration of the aquifer impracticable in some areas of the Site.

Environmental investigations began in the 1980s. Constituents of concern (COCs) were established for soil in the Supplemental Remedial Investigations (SRI) Soil Report (Science Applications International Corporation [SAIC], 2009) and groundwater in the Part 2 SRI based on magnitude and extent of chemical concentrations. The COCs consist of chlorinated volatile organic compounds (CVOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), petroleum hydrocarbons, metals, and cyanide. **Figure 1.2-1** illustrates the Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) identified at fYNOP based on soil and groundwater quality

investigation activities at the Site. The identified 74 SWMUs and 27 AOCs are tabulated on **Table 1.2-1**.

The natural groundwater gradient and COC migration across most of the Site is westward toward Codorus Creek (**Plate 1.2-1**). COCs in groundwater in the southeastern area of the Site migrate naturally to the south and southwest toward the creek.

Interim remedial actions removed contaminated soil and extracted groundwater to prevent off-Site CVOC migration from fYNOP. These actions, discussed in various technical report submittals (e.g., SRI Soils and Part 2 SRI Groundwater Reports), addressed human health and safety by preventing direct contact and ingestion exposure to contaminants. The soil removal actions, and almost 30 years of groundwater extraction and treatment, have removed considerable mass of CVOCs. Outside of apparent DNAPL source areas, interim remedial measures resulted in generally declining dissolved-phase CVOC concentration trends in groundwater. Concentrations of trichloroethene (TCE), the most widely distributed CVOC, have been reduced by 90 to 99% beneath much of the Site. However, groundwater quality within apparent DNAPL source areas shows little improvement even though considerable mass has been removed in these areas by groundwater extraction. The establishment of Technical Impracticability (TI) Areas or Zones in the DNAPL source areas is discussed in Section 1.5.

1.3 Soils Risk Assessment Findings

The fYNOP Remediation Team (fYNOP Team) submitted a Soils Risk Assessment (RA) (GSC, 2012a) to PADEP and USEPA in March 2012 that evaluated risk for direct exposure of human receptors to soil from ground surface to a depth of 15 feet below ground surface (bgs) for the Site. The PADEP and USEPA approved the Soils RA in July 2012. The Soils RA was developed in accordance with Act 2 and associated PADEP Land Recycling Program 25 Pa. Code Chapter 250 regulations and is generally consistent with USEPA RCRA corrective action risk assessment requirements.

The Soils RA evaluated exposure to regulated substances in soil outside of then-existing capped areas on the East and West Campus properties (the two Act 2 Sites for soil). Soil data from beneath then-existing buildings and parking lots were excluded from the Soils RA because these caps,

considered engineering controls, serve to preclude exposures to underlying surface and subsurface soils thereby rendering associated exposure pathways in those areas incomplete.

The Soils RA determined that noncarcinogenic hazard indices for each receptor were below the Act 2 acceptable level and the federally established cumulative hazard index of 1.0. The Soils RA also yielded potential carcinogenic risks that were within or below the acceptable Act 2 and NCP carcinogenic risk range of 10E-06 to 10E-04 for all receptors and determined that modeled exposures to lead in soils were within USEPA's acceptable levels. These results indicate that potential exposures to soil under current and hypothetical future land use conditions, as described in the report, are within acceptable limits under Act 2 and meet the Corrective Action Objectives and the selected Final Remedy as set forth in the FDRTC.

1.4 Groundwater Risk Assessment Findings

The fYNOP Team submitted a human health risk assessment for groundwater (Groundwater RA) to PADEP and USEPA in March 2018 (NewFields, 2018). The PADEP and USEPA approved the Groundwater RA in June and July 2018, respectively. The Groundwater RA was developed in accordance with Act 2 and associated PADEP Land Recycling Program 25 Pa. Code Chapter 250 regulations and is generally consistent with USEPA corrective action risk assessment requirements.

The Groundwater RA considered the following:

- Potential long-term exposure and health risk (both cancer and non-cancer) from exposure to chemicals of potential concern (COPCs) in Site groundwater,
- Vapor intrusion pathway,
- Groundwater to surface water pathway in Codorus Creek,
- COPC concentrations to evaluate three current and potential future worker scenarios and a recreational wader scenario in the creek, and
- Direct and indirect contact of COPCs in groundwater from one or more of seven LUAs (LUA 1 through LUA 7) shown on **Figure 1.1-2**.

The Groundwater RA concluded that off-Site receptors are not at risk from Site COPCs under assumed engineering, institutional, or other post-remediation care obligations. It determined that no

exceedances exist for target incremental lifetime cancer risk (ILCR) or hazard quotient (HQ) for off-Site receptors. The HQ was calculated for off-Site commercial/industrial workers, construction and utility workers exposed to vapors from groundwater deeper than 15 feet bgs, and recreational waders in the Codorus Creek.

One exceedance of the target ILCR was determined for an on-Site utility worker in areas where groundwater is less than or equal to 15 feet bgs in LUA 1 and LUA 3. This exceedance was due to the reasonable maximum exposure (RME) benzene concentration. Otherwise, potential cancer risk is not of concern for groundwater at fYNOP.

The Groundwater RA reported exceedances of the target hazard index (HI) (primarily attributable to TCE) for on-Site worker scenarios, and for off-Site utility workers where groundwater is within 15 feet bgs. The highest HIs were reported for utility workers in areas of groundwater less than or equal to 15 feet bgs in all areas under RME and all but LUA 5 under central tendency exposure (CTE). The results suggest the need for reasonable caution in planning and conducting intrusive activities in these areas.

The Groundwater RA reported that vapor intrusion could be an issue in buildings in certain parts of LUA 3. Construction of inhabited buildings in this area will be preceded by vapor intrusion investigation and may require engineering controls.

The Groundwater RA referenced well surveys documenting no use of groundwater at the Act 2 Site as a potable source (GSC, 2018b); however, the assessment determined that maximum concentrations of COPCs exceed cleanup objectives in all LUAs for a hypothetical future residential development scenario. These screening-level results indicate that residential development (including potable use of groundwater) on the Site and immediately off-Site in LUA 5 and LUA 6 would not be appropriate.

1.5 Cleanup Plan

The fYNOP Team submitted a Site-Wide Cleanup Plan (Cleanup Plan) to PADEP and USEPA in November 2019 (GSC, 2019a) that was approved by PADEP in February 2020.

The fYNOP Team, cooperatively with PADEP and USEPA, used the RCRA Facilities Investigation Remedy Selection Track (FIRST) process to develop a corrective action objective (CAO) table to

determine the Site remedy in the Cleanup Plan. The USEPA, PADEP, and fYNOP Team agreed that interim remediation implemented at the Site successfully met many of the remediation goals and served as a component of the presumptive remedy for the fYNOP. The Proposed Plan-Final Remedy (PP-FR) (GSC, 2019b) presented the presumptive remedy that was accepted by USEPA and PADEP after review and comment.

The remedy in the Cleanup Plan met the evaluation standards for RCRA Corrective Action and included activities to attain a combination of the SHS and SSS under Act 2 using engineering controls, institutional controls, and other remedial actions and obligations. The FDRTC sets forth the approved Final Remedy for the RCRA Corrective Action.

The Cleanup Plan designated two TI Areas or Zones because groundwater restoration to cleanup standards is not practicable due to Site conditions and nature of the contaminant. **Figure 1.5-1** shows the two TI Areas: TI Area 1 covers portions of the East and West Campuses, and TI Area 2 contains an area along the eastern side of the East Campus extending into the Southern Property Boundary Area (SPBA). These two TI Areas were included in the USEPA FDRTC.

2 LIST OF CONTACTS

Contact information for the fYNOP Team members is provided on **Table 2.1-1**.

3 SUMMARY OF fYNOP REMEDY

The remedy to address the presence of hazardous substances at the Site is described in the Cleanup Plan and the FDRTC and consists of a combination of engineering controls, institutional controls, and other remedial actions and obligations. Engineering controls include groundwater extraction and treatment, caps, and vapor mitigation. Institutional controls consist of activity-and-use limitations and notifications that prohibit or restrict residential land use, groundwater use, intrusive activities (e.g., excavation) in specified areas, building construction without vapor intrusion evaluation and/or mitigation, and control of soil and waste generated during earthwork activities. Monitored natural attenuation (MNA) will be used for the USEPA Corrective Action Objective of resource restoration for groundwater outside of TI Area boundaries.

Table 3.1-1 provides the objectives and metrics for each remedy component from Table 9.1-1 in the Cleanup Plan. The table specifies the type of control (engineering, institutional, or other), the land use area(s) where the remedy is applied, and the activities required to meet the objectives of each remedy. Obligations associated with each remedy component and the PRCP are summarized in Sections 4 and 5 of this report.

The estimated duration of each remedy component is greater than 30 years. Engineering and institutional controls used as a component of the remedy will be recorded in Environmental Covenants. Draft Environmental Covenants for the East Campus property (proposed new) and West Campus property (amended) prepared in accordance with the Pennsylvania Uniform Environmental Covenants Act, Act 68 of 2017, 27 Pa. C.S. § 6501-6517 are provided in **Appendix A**. The Final Report contains these draft covenants at the request of USEPA. The Environmental Covenants will be the enforceable mechanism for the implementation of the Final Remedy under RCRA and the post-remediation care requirements under Act 2.

3.1 Waiver Request

The fYNOP Team submitted a waiver request to PADEP pursuant to 25 Pa. Code Chapter 253.4(c) regulations on October 11, 2023 (GSC, 2023a) requesting exclusion from Environmental Covenant obligations for certain areas of the Site. A copy of the waiver request was also provided to USEPA. The waiver covers areas shown on **Figure 3.1-1** that consist of U.S. Route 30 and Interstate 83

rights-of-way south of the fYNOP in LUA 5, and the railroad track corridor and levee areas along Codorus Creek west of the fYNOP in LUA 5 and LUA 6.

The waiver was requested because neither current nor probable future use of groundwater nor future residential development from these LUAs are likely. It is more than reasonable to assume that utility worker exposure to shallow groundwater in these areas will be infrequent and of relatively short duration.

3.2 Implementation of Cleanup Plan Remedy

The following Sections describe the implementation of the proposed remedy in the Cleanup Plan.

3.2.1 Removal of Direct Contact Exposure Prevention Capped Areas

Caps, as an engineering control component of the remedy for areas on the East and West Campuses, prevent direct contact to contaminated soil, soil fill, and/or waste by human receptors. **Figure 3.1-2** contains the capped areas identified on Figure 9.1-1 in the Cleanup Plan.

A March 2022 cap area inspection confirmed that the vast majority of areas proposed for capping in the Cleanup Plan are currently covered with acceptable cap materials. **Figure 3.1-3** shows a few spatially limited, uncapped areas on the East and West Campuses within areas proposed to be capped in the Cleanup Plan. These uncapped areas represent 1.1% and 1.5%, respectively, of the total proposed capped areas.

Areas not capped on the East Campus consist of small islands within parking lots. Capping of these areas is not necessary to attain or maintain the selected remediation standards because of the following:

- Small (*de minimis*) size totaling 0.52 acres,
- Lack of documented historical impacts in these areas,
- Most of these areas were not considered capped during the Soils RA evaluation, and
- Implementation of intrusive activity and waste management limitations and controls, including worker health and safety plans, prior to earth disturbance activity in these areas.

Areas not capped on the West Campus consist of small islands within parking lots and grass-covered areas along the western and northern sides of the West Parking Lot (WPL). Capping of these areas is not necessary to attain or maintain the selected remediation standards due to the obligation that a Soil Management Plan, including worker health and safety plans and waste management restrictions, be in place prior to earth disturbance in these areas. Additionally, the Township-approved land development plan for the 2016 redevelopment of the West Campus property includes landscaping obligations and impervious cover restrictions that limit fYNOP's ability to add caps over these areas.

3.2.2 Addition of Direct Contact Exposure Prevention Capped Areas

The fYNOP Team performed an evaluation of soil quality data collected since publication of the Soils RA (GSC, 2012a) as reported herein (See Section 4.1). The evaluation identified two spatially limited areas with concentrations that are not consistent with the Soils RA. These areas are currently covered by asphalt or soil which prevents direct contact exposure. These additional caps, shown on **Figure 3.1-4** for the East and West Campuses, have been incorporated into the remedy to prevent direct contact exposure to impacted soil in these spatially limited areas.

An existing cap inadvertently omitted from the Cleanup Plan consists of a geosynthetic liner beneath a drainage swale that runs along the northern entrance drive on the East Campus. The liner prevents direct contact to contaminated soil and waste and is included in the remedy as a direct contact cap for the Site.

Section 4.1.4 of this report provides a detailed discussion of the final cap used to attain and maintain the selected remediation standards.

3.2.3 Removal of Infiltration Reduction Capped Areas

The Cleanup Plan identified caps that prevent direct contact as having an additional benefit of limiting infiltration and reducing potential leaching of COCs from soil and waste to groundwater. As shown on **Figure 3.1-5**, infiltration reduction caps proposed in the Cleanup Plan (Figure 9.1-3) are located entirely on the West Campus and are coincident with caps preventing direct contact.

A March 2022 cap area inspection confirmed that most areas proposed for capping in the Cleanup Plan to limit infiltration are covered with acceptable cap materials. **Figure 3.1-6** identifies a few spatially limited, uncapped areas comprising 12.7% of the total proposed capped area.

These areas are uncapped or covered with materials that do not limit infiltration (e.g., gravel, rip rap, and soil). Caps in these identified areas are not included in the final remedy because most are located within the boundary of TI Area 1 where attainment of the groundwater cleanup standard is not practicable. Therefore, infiltration reduction caps are not necessary to attain or maintain the selected remediation standards and/or the Final Remedy. In addition, the land development plan for the West Campus includes limitations on the total area of impervious cover (Township zoning) that would be violated if these areas were capped with impervious materials. Section 4.1.4 of this report provides a detailed discussion of the final cap used to attain and maintain the selected remediation standards.

3.2.4 WPL Groundwater Extraction System Operation

The remedy proposed in the Cleanup Plan and FDRTC included operation of the WPL groundwater extraction system as an engineering control at the Site. Historical data indicates that natural processes coupled with almost 30 years of WPL extraction system operations have reduced the mass of COCs in the aquifer and mass flux to the Codorus Creek to a point where WPL pumping may not be needed to meet applicable surface water quality criteria (AWQC). Accordingly, the Cleanup Plan included shut-down testing of the WPL extraction system to evaluate surface water quality attainment and continued compliance with the WPL extraction system off.

The Surface Water Compliance Report (GSC, 2022a) documented data collected during the first two years of surface water monitoring with the WPL extraction system operating. Monthly sampling and analysis (September 2019 through August 2021) detected concentrations of surface water COCs in Codorus Creek below AWQC. The data verified compliance with AWQC in the creek during pumping conditions using the process described in the Cleanup Plan.

In September 2021, the WPL extraction system was shut down to conduct one year of monthly surface water monitoring (September 2021 through August 2022) using the process described in the Cleanup Plan and Surface Water Compliance Report. In September 2022, a second year of monthly surface

water monitoring (September 2022 through August 2023) with the WPL extraction system off was approved (USEPA, 2022).

Surface water monitoring results collected to date document that operation of the WPL extraction system is not necessary to attain or maintain compliance with AWQC in Codorus Creek (Section 4.3). Continued monitoring of surface water quality in Codorus Creek with the WPL extraction system off will be conducted in accordance with the PRCP discussed in Section 5 of this report. The system will remain in-place while continued surface water sampling is conducted in accordance with the PRCP. Future decommissioning and removal of the WPL extraction system may be proposed in annual PRCP reporting.

4 ATTAINMENT DEMONSTRATION

This Section describes the demonstration of attainment under Act 2 for soil, groundwater, and surface water at the Site; Completion with Controls of the RCRA Corrective Action for the Site (excluding only soils in the MMRP Cleanup Area as noted in Section 1) and all media of concern, and corresponding closure of the SWMUs and AOCs identified in **Table 1.2-1**. The vapor intrusion pathway is addressed in the attainment demonstration for soil and groundwater. As stated previously, the Soils RA completed in 2012 and Groundwater RA completed in 2018 reported that the Site poses no unacceptable risk to human health or the environment. Soil and groundwater attainment demonstrations include an assessment to verify that current Site conditions are consistent with the baseline conditions used in the RAs. Surface water monitoring conducted in accordance with the Cleanup Plan verifies current compliance with AWQC in Codorus Creek.

The substances for which attainment of the selected remediation standards for Site soil and groundwater is demonstrated are provided in **Tables 4.0-1** and **4.0-2**, respectively.

4.1 Soil Attainment

This Section provides the attainment demonstration using a combination of the Act 2 SHS and SSS for soil at fYNOP, which also meets the Final Remedy soil provisions (Section 5.A.). The Act 2 Sites for soil are the East Campus and West Campus properties as shown on **Figure 4.1-1**. The two properties were evaluated separately in the Soils RA.

As stated in Section 1.3, the Soils RA determined that potential exposures to soil under then-current and hypothetical future land use conditions are within acceptable limits under Act 2 using several conservative assumptions and approaches. Soil data from beneath then-existing buildings and parking lots were excluded from the Soils RA because these caps eliminated direct contact exposure pathways to soil contamination in those areas.

The Soils RA evaluated soil data collected between 1987 and 2008 using four data sets based on sample depth and location as follows:

- Data Set 1 - Surface soil from zero to 2 feet bgs in the East Campus,
- Data Set 2 - Surface and subsurface soil from zero to 15 feet bgs in the East Campus,

- Data Set 3 - Surface soil from zero to 2 feet bgs in the West Campus, and
- Data Set 4 - Surface and subsurface soil from zero to 15 feet bgs in the West Campus.

Each data set is presented on Tables 1 through 4 in the Soils RA. Copies of these tables are included in **Appendix B** of this report.

4.1.1 Statewide Health Standard Attainment for Soil

The Soils RA used the screening process provided in the PADEP TGM (PADEP, 2002 and 2021) for sites demonstrating attainment using a combination of standards. The screening steps are as follows:

- The first screening step eliminated substances not detected by laboratory analyses. Substances screened out during this step are considered compliant with the SHS.
- The second screening step (medium-specific concentration [MSC] screening step) eliminated substances with maximum detected concentrations less than or equal to the SHS MSCs. The soil MSCs used for this step were for a non-residential, used aquifer with total dissolved solids (TDS) less than 2,500 milligrams per kilogram (mg/kg). Substances screened out by comparison to the SHS MSC, are considered compliant with the SHS obviating the need for further demonstration of SHS attainment.

For substances screened out by comparison to the SHS MSC, the maximum concentration of that substance did not exceed the soil MSC. Therefore, these substances are compliant with the SHS and there is no need to demonstrate further that these substances attain the SHS. Substances determined to be compliant with the SHS using the Soils RA screening process are provided on tables in **Appendix B**.

4.1.1.1 Evaluation of Statewide Health Standard Medium-Specific Concentration Changes

The Soils RA determined compliance with SHS MSCs in effect at the time (effective January 8, 2011). To evaluate MSC changes since the Soils RA, the January 8, 2011, MSCs were compared to the current MSCs (effective November 20, 2021). The comparison identified substances with current MSCs lower than the 2011 MSCs. Concentrations of substances for which the MSCs were lower than those used in the Soils RA screening process were then compared to the maximum detected soil concentrations in each of the four data sets.

As shown on **Table 4.1-1**, maximum concentrations of 2,6-dinitotoluene (26DNT) and nitrobenzene in surface soil (Data Set 3) and surface and subsurface soil (Data Set 4) in the West Campus were greater than current MSCs. Therefore, since attainment of SHS in these two locations for these two substances cannot be demonstrated with updated MSCs, the selected remediation standard has been changed to the SSS, as discussed below. **Figure 4.1-1** shows the West Campus locations where these substances were detected at concentrations above the current SHS MSCs.

4.1.2 Site-Specific Standard Attainment for Soil

Under the SSS evaluation in the Soils RA, data for substances retained after the MSC screening step were evaluated by the following process:

- The maximum detected concentration of each substance was compared to USEPA's Regional Screening Levels (RSLs) for industrial soil that correspond to a cancer risk level of $1x10^{-6}$ and an HQ of 0.1. This RSL screening step eliminated substances from the Soils RA that were retained because of low soil-to-groundwater numeric values but that otherwise do not present significant risks to human health as a result of direct contact with soils.
- Substances with a maximum detected concentration lower than the RSL were eliminated from further evaluation but remained part of the SSS attainment.
- Substances with a maximum detected concentration greater than the RSL were retained as a COPC and further evaluated in the Soils RA.
- Exposure point concentrations for COPCs were calculated, and a quantitative risk assessment performed.

As a result of the screening steps above, the Soils RA determined that soil quality on the East and West Campuses is within acceptable limits under Act 2 and meets the Corrective Action Objectives and Final Remedy. Substances where attainment of the SSS was demonstrated through RSL screening and by baseline risk assessment calculations are provided on tables in **Appendix B**.

4.1.2.1 Evaluation of Regional Screening Level Changes

The RSL screening step in the Soils RA used RSLs in place at the time (effective November 2011). The 2011 RSLs were compared to the May 2022 RSLs to identify substances with RSLs lower than those used in the Soils RA.

As shown on **Table 4.1-1**, the comparison identified 2,6-dinitotoluene (26DNT) in West Campus surface soil (Data Set 3) and surface and subsurface soil (Data Set 4) with a maximum detected concentration greater than the May 2022 RSL (1.53 mg/kg versus 1.5 mg/kg). This substance was not previously retained as a COPC in the Soils RA because the maximum concentration was lower than the MSC at the time (Section 4.1.1.1). The evaluation also determined that nitrobenzene, retained during the MSC screening step in Section 4.1.1.2, is not a COPC because the maximum detected concentration is lower than the May 2022 RSL (0.88 mg/kg versus 22 mg/kg).

A soil sample containing 26DNT at a concentration above the RSL was collected from the West Campus at a depth of 1 to 1.5 feet bgs (**Figure 4.1-1)**. Although this area was not capped when the sample was collected, it is currently covered with more than 4 feet of soil cap that prevents direct exposure. This material was emplaced during the reconfiguration of Eden Road in 2004, and redevelopment of the West Campus in 2016.

4.1.3 Evaluation of Soil Data Collected After Soils Risk Assessment

Plate 4.1-1 shows the locations of 141 soil samples collected after Soils RA publication. These samples were collected from 2009 to present outside of capped areas on the East and West Campuses. Data from these samples were organized by sample depth and location consistent with methodology in the Soils RA. Soil data were grouped into Data Sets 1 and 2 (East Campus) and Data Sets 3 and 4 (West Campus) as described in Section 4.1.1. No new surface samples were collected in the West Campus (Data Set 3).

Analytical data from the additional soil samples are presented on **Tables 4.1-2**, **4.1-3**, and **4.1-4** for Data Sets 1, 2, and 4, respectively. These data were also added to the screening tables in the Soils RA (Tables 1, 2, and 4) reproduced as **Tables 4.1-5**, **4.1-6**, and **4.1-7**, respectively, for this report. Data screening was conducted following the methodology described in Sections 4.1.1 and 4.1.2.

4.1.3.1 Statewide Health Standard Attainment for Data Collected Subsequent to the Soils Risk Assessment

Data on **Tables 4.1-5**, **4.1-6**, and **4.1-7** contain substances with no detections and with maximum detected concentrations less than the soil MSCs for all three Data Sets. Therefore, these substances are compliant with the SHS in East and West Campus soils and do not affect the Soils RA conclusions.

4.1.3.2 Site-Specific Standard Attainment for Data Collected Subsequent to the Soils Risk Assessment

Soil in Data Sets 2 and 4 with maximum detected concentrations greater than the soil MSCs were compared to May 2022 RSLs. **Tables 4.1-6** and **4.1-7** show that maximum detected concentrations of substances are greater than the RSL in four East Campus samples (Data Set 2) and four West Campus samples (Data Set 4). These substances include trivalent and hexavalent chromium in Data Sets 2 and 4; 1,2,4-trimethylbenzene (124TMB), cis-1,2-dichloroethene (cis12DCE), and TCE in Data Set 2; and tetrachloroethene (PCE), TCE, and vinyl chloride (VC) in Data Set 4.

Trivalent and hexavalent chromium were retained as COPCs in the Soils RA and were found in soil samples collected after Soils RA publication. Hazard and risk calculations in the Soils RA for trivalent and hexavalent chromium verified values within acceptable limits under Act 2 (GSC, 2012a). The maximum detected concentration of trivalent and hexavalent chromium in Data Sets 2 and 4 collected after Soils RA publication are less than the maximum detected concentrations of trivalent and hexavalent chromium used in the Soils RA. Therefore, these results do not change the Soils RA conclusions and SSS attainment and Final Remedy completion for trivalent and hexavalent chromium in East and West Campus soils is demonstrated.

Maximum detected concentrations of 124TMB, cis12DCE, and TCE in Data Set 2 and PCE, TCE, and VC in Data Set 4 are greater than the maximum detected concentrations for these substances evaluated in the Soils RA. As discussed in Section 3.2.2, areas where soil concentrations from recent sampling activities were greater than concentrations used in the Soils RA are currently covered; the addition of caps in these two areas have been incorporated into the remedy. Therefore, potential direct contact exposure to soil at these locations is prevented by pathway elimination and attainment of the SSS and the Final Remedy is demonstrated for these substances.

4.1.4 Engineering Controls for Soil

Engineering controls used to attain and maintain the SSS and Final Remedy for soil at the Act 2 Sites consist of permanent caps and a vapor barrier beneath a building. Specific components of these engineering controls are discussed in the following sections.

4.1.4.1 Caps to Eliminate Direct Contact Exposure and Reduce Infiltration

Attainment of the SSS and Final Remedy for soil is demonstrated using caps that prevent direct contact exposure by acting as a barrier between human receptors and contaminated soil, soil fill, and/or waste at the fYNOP. Caps also obstruct contaminated particles from working up through capped surfaces.

While not necessary to demonstrate attainment of the SSS or Final Remedy, caps that prevent direct contact also have an additional benefit to reduce leaching of COCs to groundwater. Areas associated with capping that provide infiltration reduction are located entirely on the West Campus property and are coincident with caps preventing direct contact exposure.

In March 2022, capped areas identified in the Cleanup Plan on the East and West Campus properties were inspected. The inspection documented caps in place at locations shown on **Figure 4.1-1** and **Plate 4.1-2**. The inspection verified materials used as caps at fYNOP as follows:

1. **Asphalt** – Compacted mineral aggregate bound together with bitumen with a minimum thickness of 1.5 inches.
2. **Concrete** – Aggregate mixed with cement to hold the aggregate together with a minimum thickness of 2 inches.
3. **Soil** – Material composed of mineral particles, rocks, and organic matter with a minimum thickness of 6 inches.
4. **Gravel or Stone** – Aggregate composed of rocks, stones, or pebbles that are less than 4 inches in size with a minimum thickness of 2 inches.
5. **Rip Rap** – Rock or other material that is greater than 4 inches in size with a minimum thickness of 7 inches used to protect soils or structures from erosion and stabilize slopes.
6. **Subsurface Geomembrane and Geotextile Liners** – Impermeable synthetic membrane made from thin continuous polymeric sheets.
7. **Subsurface Clay Liner** – Continuous layer of low permeability clay.
8. **Building or Structure Slabs** – Construction material installed for its intended use (e.g., concrete floor or basement walls).

Construction details for caps, where available, are provided **Appendix C**.

4.1.4.2 West Campus Vapor Barrier

The potentially complete exposure pathway for vapor intrusion from soil and groundwater to the warehouse building on the West Campus property is eliminated using a 10-mil vapor barrier installed beneath the concrete slab of the ERLC warehouse building. The vapor barrier was installed with USEPA approval and review by PADEP as a presumptive mitigation measure to prevent potential vapor intrusion into the building. A Soil-Gas Sampling and Vapor Intrusion assessment report dated May 2016 was submitted to USEPA and PADEP along with the proposed construction details and material specifications for the proposed vapor barrier (ARM Group, Inc. [ARM], 2016). Construction details for the vapor barrier and a copy of the assessment report are included in **Appendix D**.

4.1.5 Institutional Controls for Soil

Institutional controls used to attain and maintain the SSS and the Final Remedy for soil are as follows:

- Land use restrictions,
- Evaluation and mitigation of potential vapor intrusion into future inhabited spaces,
- Intrusive activity limitations and controls, and
- Waste management limitations.

Institutional controls are described in Sections 4 and 5 of this report.

4.2 Groundwater Attainment

This Section documents attainment of the Act 2 SSS for groundwater at fYNOP. Attainment is demonstrated by confirming that current groundwater concentrations are generally consistent with the concentrations used in the Groundwater RA which documented acceptable risk. The groundwater exposure pathways and exposure factors have not changed since the Groundwater RA. Engineering and institutional controls considered in the Groundwater RA and included in the Cleanup Plan are used to demonstrate attainment and maintenance of the SSS and the Final Remedy.

The components of the groundwater attainment demonstration include the following:

- Verification that conditions and assumptions used in the Groundwater RA are in place. This includes an implementation of controls and restrictions assumed in the Groundwater RA and

an evaluation of groundwater quality from samples collected after publication of the Groundwater RA.

- Fate and transport evaluation using statistical analyses to assess general trends in groundwater quality at the Site.
- Engineering controls that include a cap to prevent vapor intrusion into the ERLC warehouse building, a groundwater extraction and treatment system to control groundwater flow gradients in the SPBA, and a groundwater extraction and treatment system in the WPL if and as necessary to prevent exceedances of the AWQC in Codorus Creek (presently shut down as unnecessary).
- Institutional Controls (activity and use limitations) to restrict groundwater and residential land use, to manage intrusive activity (excavation) in specified areas, and to prohibit building construction without vapor intrusion evaluation and/or mitigation. Notifications, assessments, and waivers will also be used to attain and maintain compliance.
- Continued groundwater sampling, analyses, evaluation, and reporting in accordance with the PRCP discussed in Section 5 of this report to verify fate and transport assumptions and the progress of MNA for resource restoration for areas of fYNOP outside of the TI Areas.

Groundwater sampling has been conducted at fYNOP since 1986. Analytical data from sampling were used to identify substances and select COPCs for risk calculations reported in the Groundwater RA (NewFields, 2018). The Groundwater RA evaluated exposures to COPCs in groundwater from six LUAs (LUA 1 through LUA 6) shown on **Figure 1.1-2**.

Groundwater sampling conducted since 2013 is used to demonstrate attainment of the SSS and the Final Remedy for groundwater (Section 5.B) by showing that recent groundwater quality data is generally consistent with the concentrations used in the Groundwater RA and that groundwater exposure pathways and exposure factors have not changed since approval of the Groundwater RA.

Groundwater sampling outside of the TI Area boundaries will be continued in accordance with the PRCP discussed in Section 5 of this report. Sampling data will be evaluated annually to verify fate and transport assumptions, continued maintenance of the SSS, and the progress of MNA for resource restoration for areas of fYNOP outside of the TI Area boundaries.

The USEPA aquifer restoration goal for groundwater outside of TI Areas is to meet maximum contaminant levels (MCLs) that are equivalent to SHS residential MSCs. For COCs that do not have a MCL, RSLs are considered the groundwater cleanup goal.

The groundwater data evaluation and attainment demonstration are provided in the following Sections.

4.2.1 Groundwater Attainment Sampling Scope

Groundwater data to evaluate attainment originated from samples collected at fYNOP from 2013 through 2022. The attainment samples, collected from wells identified in the Cleanup Plan shown on **Figure 4.2-1**, are in the Northern Property Boundary Area (NPBA), Eastern Site Perimeter (ESP), South-Central Site Area (SCSA), SPBA, South Plume Area (SPA), Codorus Creek Levee Area (Levee Area), West Side of Codorus Creek, and Northern Site Perimeter (NSP). **Table 4.2-1** provides information for wells sampled (type, depth, construction, geology, and location).

Table 4.2-2 includes wells sampled and laboratory data from annual groundwater sampling outside of TI Areas used for the groundwater attainment evaluation. Data from wells in the SPBA and wells located along the boundary of TI Area 1 are sampled more frequently (e.g., quarterly) and are also used in this evaluation. Detailed information for the sampling scope and objectives is described in the Cleanup Plan and the Groundwater and Surface Water Monitoring Report (GSC, 2022b).

Groundwater monitoring procedures used to collect and analyze data are described in the Field Sampling Plan (FSP) (GSC, 2012b) and the Quality Assurance Project Plan (QAPP) (GSC, 2012c, 2014, and 2020a) approved by PADEP and USEPA. Copies of the FSP and the QAPP are available on the public website, https://yorksiteremedy.com.

Groundwater samples were analyzed for the project analyte list of volatile organic compounds (VOCs) in the QAPP using SW-846 Method 8260. The samples from MW-2 in the ESP were analyzed for total and available cyanide using USEPA Method 9014 and OIA-1677, respectively. The laboratory data quality assessment (DQA) for the samples is described in Groundwater and Surface Water Monitoring Reports (GSC, 2020b, 2021, 2022b and 2023b).

4.2.2 Groundwater Attainment Sampling Results

Analytical results for 346 groundwater attainment samples collected from the NPBA, ESP, SPBA, SCA, SPA, Levee Area, West Side of Codorus Creek, and the NSP since Groundwater RA completion are provided on **Table 4.2-3** (VOCs) and **Table 4.2-4** (total and available cyanide). The tables include USEPA MCLs, USEPA tap water RSLs that correspond to a cancer risk level of $1x10^{-6}$ and an HQ of 1.0, and PADEP SHS residential and non-residential MSCs for comparison. A summary of the analytical results for the groundwater attainment demonstration is provided on **Tables 4.2-5** and **4.2-6**. The tables identify the number of samples collected, number of detections, maximum concentrations, and regulatory standards for COCs on a per well basis.

Groundwater chemicals considered Site COCs were established in the Part 2 SRI (GSC, 2018a) based on magnitude of chemical concentration, detection frequency, and potential for off-Site migration. Site COCs for the attainment evaluation are CVOCs (PCE and TCE), and CVOC degradation products (cis12DCE, VC, 1,1-dichloroethane [11DCA], 1,1-dichloroethene [11DCE], 1,2-dichloroethane [12DCA], and 1,1,1-trichloroethane [TCA]). Additional COCs evaluated consist of benzene, methyl tertiary-butyl ether (MTBE), and cyanide.

A discussion of groundwater analytical results by area at fYNOP is in **Appendix E**.

4.2.3 Groundwater Fate and Transport and Statistical Analysis

The conceptual model (Section 4.2.3.1) presents the nature of COCs residing in groundwater at fYNOP and Section 4.2.3.2 presents the extent of Site COCs in the aquifer. Fate and transport of COCs in groundwater were evaluated using composite plume maps and trend analyses.

COC concentration trends in groundwater at fYNOP were evaluated using Mann-Kendall statistical analysis with USEPA's ProUCL version 5.2 statistical software package (USEPA, 2022). The Mann-Kendall test used the confidence coefficient (CC) of 90% and 80% to determine if a statistically significant upward or downward trend was indicated by the data.

If a trend could not be determined using the 90% CC, then an 80% CC was used. If a statistically significant trend was not indicated at an 80% CC, a least squares linear regression analysis was

performed using ProUCL. However, no statistical test of significance was used to evaluate the trends identified using linear regression.

The detailed evaluation of the nature and extent of COCs, and groundwater quality trends on a per-area basis at the Site are provided in the following Sections.

4.2.3.1 Conceptual Site Model Summary

As discussed in the CSM presented in the Part 2 SRI (GSC, 2018a), CVOCs in the form of DNAPL were spilled, leaked, and disposed directly to the ground in some areas on-Site. CVOCs are pervasive throughout the Site at concentrations that exceed soil and groundwater MSCs. Factors affecting transport of DNAPL releases are highly dependent on the geologic characteristics at the location of the release. The aquifer matrices underlying the Site are composed of fractured quartzitic sandstone and karstic carbonate rock. The karstic carbonate rock that underlies the Central Plant Area (CPA), North Plant Area (NPA), and WPL is well connected and results in high fracture permeability. Less connected, less permeable quartzitic rock underlies the remaining areas of the Site.

In the non-carbonate aquifer (Overview of Fate and Transport Mechanisms [Non-Carbonate Bedrock Setting], **Figure 4.2-2**), DNAPL migrates vertically downward through a thin mantle of soil to the weathered bedrock, where it migrates through tight joints and fractures in the bedrock. In the karst aquifer (Overview of Fate and Transport Mechanisms [Carbonate Bedrock Setting], **Figure 4.2-3**), DNAPL migrates vertically downward through soil/regolith to pinnacled bedrock, where it is directed along the soil-bedrock interface. It then migrates through solution channels, fractures, and bedding planes in the bedrock.

In the subsurface, some of the DNAPL slowly dissolved in the groundwater or infiltrating water from precipitation, undergoing several processes. Dissolved (aqueous) phase CVOC plumes extending from each source area migrated through the aquifer transported by groundwater flow to a point of discharge to surface water or, currently in the SPBA, to an active groundwater extraction well. Groundwater in the CPA, NPA, and WPL migrated generally westward toward the Codorus Creek through residuum and solution-enhanced pathways in the carbonate bedrock.

The aqueous-phase chemicals diffused into the rock matrix and adsorbed onto organic carbon or mineral surfaces. In the aqueous phase, anaerobic bacteria break down PCE and TCE to cis12DCE and VC, and the TCA to 11DCA and chloroethane. TCA also abiotically transforms to 11DCE.

DNAPL has likely been present in the fYNOP groundwater for 70 or more years, since vapor degreasing operations began prior to 1948 (Key Reporters, 1991). During that time, natural processes and interim remedial actions have resulted in the reduction of the DNAPL mass (**Figure 4.2-4**). Nonetheless, a few probable DNAPL sources remain caught up in soil and bedrock. Primary source areas are the North Building 4 (NBldg4) Area, the northwest corner of the WPL, and the southwest corner of the WPL, all within the limestone aquifer. In these areas, concentrations of CVOCs extend to depths of hundreds of feet.

In addition to the CVOCs, benzene, MTBE, and cyanide occur above MSCs at fYNOP, but have limited distribution in Site groundwater. Benzene and MTBE result from a former underground storage tank fuel dispenser system leak in the CPA (soils in this area were remediated pursuant to the Pennsylvania storage tank corrective action regulations, 25 Pa. Code Chapter 245, Subchapter D). Cyanide occurs along the eastern boundary of the fYNOP property because of historical disposal activity.

4.2.3.2 Spatial Plume Stability Analysis

Figure 4.2-5 is a composite plume map showing the lateral extent of TCE and PCE in groundwater at a concentration above the MSC. The information for the maps originated from the Part 2 SRI (GSC, 2018a) and the Southern Property Boundary/South Plume Areas Supplemental Remedial Investigation and Interim Groundwater Remediation Report (GSC, 2019c). This map represents the maximum plume extent and was fully considered for the Groundwater RA.

To evaluate groundwater attainment conditions, the maximum concentration from groundwater attainment samples (post-Groundwater RA) was compared to the MSC as shown on **Tables 4.2-5** and **4.2-6**; the collection period and number of attainment samples used for the evaluation are also provided on these tables. Wells with a maximum concentration in groundwater below the MSC are highlighted in green and wells with a maximum concentration in groundwater above the MSC are highlighted in yellow. Groundwater data from attainment samples outside of the plume were

evaluated to determine if the composite plume migrated to these locations since completion of the Groundwater RA.

As shown on **Figure 4.2-5**, the lateral extent of the historical plume encompasses the 48 attainment sample locations with maximum TCE, cis12DCE, and VC concentrations in groundwater above the MSC. Three attainment sample locations have concentrations of PCE above the MSC that are outside the historical plume as follows:

- Groundwater from MW-14 in ESP contained a maximum concentration only slightly above the MSC (5.6 micrograms per liter [µg/L] versus 5 µg/L),
- Groundwater from MW-88 in SCSA contained a maximum concentration that was inadvertently not used to construct the historical plume map in the Part 2 SRI, and
- Groundwater from MW-166 in SPBA contained concentrations in 2021 and 2022 that were higher than historical concentrations attributed to a localized and transient event (GSC, 2022b).

The comparison between attainment data and pre-Groundwater RA data indicates the distribution of TCE, PCE, cis12DCE, and VC at concentrations above the MSC in groundwater is predominantly within the boundary of the historical plume considered by the Groundwater RA.

4.2.3.3 Groundwater Concentration Trend Analysis

Tables 4.2-7 and **4.2-8** present the results of trend analyses conducted on the groundwater attainment data from 48 wells. Trends were determined for COCs in groundwater samples collected from each area at fYNOP that include NPBA, ESP, SCSA, SPBA, SPA, Levee Area, West Side of Codorus Creek, and NSP. **Table 4.2-7** presents the trend results for TCE, PCE, cis12DCE, and VC. **Table 4.2-8** presents the trend results for 11DCA, 11DCE, 12DCA, TCA, benzene, and MTBE for SCSA and SPA, only. Trend analyses outputs and plots are included in **Appendix F**.

For purposes of the statistical analysis, non-detects were represented by the value of the method detection limit (MDL) which was the lowest level of reporting by the analytical laboratory. A trend analysis could only be performed if there were sufficient qualifying data to perform the analysis.

Results of trend analyses for TCE, PCE, cis12DCE, VC, 11DCA, 11DCE, 12DCA, TCA, benzene, and MTBE in groundwater attainment samples yield 28 statistically significant decreasing trends at

the 90% CC and 26 additional statistically significant decreasing trends at the 80% CC, totaling 54 statistically significant decreasing trends. For attainment data sets with no discernable statistically significant trend, 27 decreasing trends were determined by linear regression.

Increasing trends where the data were above the MSC for a particular constituent were not seen at the 90% CC, were determined twice at the 80% CC (MW-16S and MW-20M in NPBA), and reported six times by linear regression (MW-14 in ESP, MW-20S in NPBA, MW-115 in SCSA, MW-166 in SPBA, and Cole Steel (MW-12) and GM-1D in SPA). Increasing trends with data below the MSC occurred six times at the 90% CC, twice at the 80% CC, and eight times by linear regression. Three increasing trends for TCE, four for PCE, and one for VC above the respective MSC resulted from the analyses.

Situations where the data set contained too few detections to perform trend analyses occurred 115 times for all COCs combined (i.e., less than four detections). COC concentrations in these data sets were well below the MSC.

Since the completion of the Groundwater RA, statistical analysis of groundwater concentration trends determined that only eight of the 48 wells evaluated contain groundwater with increasing COC trends above the MSC. Of those eight, two wells contained groundwater with statistically significant increasing TCE concentration trends and six wells had increasing TCE, PCE, or VC trends based on linear regression.

The results of concentration trend analyses in Site groundwater for statistically significantly increasing or decreasing trends (80% and 90% CC) determined the following:

- No statistically significant increasing trends were determined at the 90% CC for TCE, PCE, cis12DCE, VC, 11DCA, 11DCE, 12DCA, TCA, benzene, and MTBE above the respective MSCs,
- Statistically significant increasing trends with data below the MSC occurred six times at the 90% CC (two for PCE and four for cis12DCE),
- Twenty-eight statistically significant decreasing trends were determined at the 90% CC for TCE, PCE, cis12DCE, VC, 11DCA, 11DCE, 12DCA, TCA, benzene, and MTBE,

- Twenty-six decreasing trends were determined at the 80% CC for TCE, PCE, cis12DCE, VC, 11DCA, 11DCE, 12DCA, TCA, benzene, and MTBE, and
- Statistically significant increasing trends with data above the MSC were determined twice at the 80% CC and twice with data below the MSC. Both NPBA wells (MW-16S and MW-20M) contained groundwater with increasing TCE concentrations.

The groundwater trend analysis results by area at fYNOP are discussed in **Appendix G**.

4.2.4 Engineering Controls for Groundwater

Engineering controls used to attain and maintain the SSS for groundwater at the Act 2 Site consist of groundwater extraction and treatment and a vapor barrier. Specific components of these engineering controls are discussed in the following Sections.

4.2.4.1 SPBA Groundwater Extraction and Treatment System

The SPBA groundwater extraction system, operating since 2018, captures shallow groundwater containing CVOCs and mitigates potential vapor intrusion in off-Site inhabited structures. Groundwater is extracted from collection wells and is then treated to remove dissolved-phase VOCs prior to discharge under the fYNOP National Pollutant Discharge Elimination System (NPDES) permit. The SPBA extraction and treatment system will continue to be operated and monitored in accordance with the PRCP discussed in Section 5 of this report.

4.2.4.2 WPL Groundwater Extraction and Treatment System

During operation, the WPL groundwater extraction system collects Site-impacted groundwater flowing toward Codorus Creek to meet AWQC in the creek. Groundwater extracted from collection wells is treated to remove dissolved-phase VOCs prior to discharge under the fYNOP NPDES permit.

The WPL extraction system is currently shut down to evaluate surface water quality using the process described in the Cleanup Plan and will not be operated unless necessary to meet AWQC in the creek. The system will be maintained as an engineering control while monthly surface water sampling of Codorus Creek is continued in accordance with the PRCP. Surface water sampling results will be evaluated to verify continued compliance with AWQC in the creek. Section 5.1.3 of this report identifies the conditions under which compliance is not indicated (i.e., surface water results are greater

than AWQC). Future decommissioning and removal of the WPL extraction system may be proposed in annual PRCP reports.

4.2.4.3 West Campus Vapor Barrier

The potentially complete exposure pathway for vapor intrusion from soil and groundwater to the warehouse building on the West Campus property is eliminated using a 10-mil vapor barrier installed beneath the concrete slab of the ERLC warehouse building. The vapor barrier is described in Section 4.1.4.2.

4.2.5 Institutional Controls for Groundwater

Institutional controls used to attain and/or maintain the SSS and the Final Remedy for groundwater are as follows:

- Groundwater use restrictions,
- Evaluation and mitigation for potential vapor intrusion into future inhabited spaces,
- Intrusive activity limitations and controls,
- Periodic notification of potential exposure to workers,
- Periodic assessment of continued nonresidential land use, and
- Periodic assessment of continued nonuse of groundwater.

4.2.6 Groundwater Attainment Conclusions

The conclusions to the groundwater evaluation for Act 2 and Final Remedy compliance are as follows:

- The Groundwater RA for fYNOP, published in 2018, concluded that groundwater poses no adverse risk to human health or the environment given the assumptions used (including under WPL extraction system pumping and non-pumping conditions). Groundwater exposure pathways and exposure factors have not changed since the Groundwater RA.
- Comparison of the historical COC plume areal extent at the time of the Groundwater RA with current COC data indicates a generally stable or shrinking plume.
- Evaluation of concentration trends in groundwater attainment samples concluded that two statistically significant increasing trends, 54 statistically significant decreasing trends, and

40 "no trends" exist for Site COC concentrations in groundwater; the linear regression analysis of the "no trends" data identified 14 increasing and 27 decreasing COC trends.

- Monitoring of Codorus Creek demonstrates that operation of the WPL groundwater extraction system is not currently necessary to meet AWQC in Codorus Creek, as discussed in Section 4.3. The WPL groundwater extraction system will remain in place as an available engineering control should its operation be necessary to maintain compliance with AWQC.

- In-place engineering controls (vapor barrier in ERLC warehouse and SPBA groundwater extraction and treatment system) are currently required for Act 2 compliance and to maintain the Final Remedy.

- Planned institutional controls (activity-and-use limitations) to restrict groundwater use, prohibit residential land use, and manage intrusive activity (excavation) in specified areas are currently required for Act 2 compliance and continued maintenance of the Final Remedy.

In addition, fYNOP intends to perform groundwater sampling and analyses and prepare annual PRCP reports containing monitoring data and evaluation of Site conditions in accordance with the PRCP discussed in Section 5 of this report.

4.3 Surface Water Attainment

This Section describes Act 2 attainment and the Final Remedy for surface water. The Groundwater RA evaluated the potential for human health exposure to surface water affected by diffuse groundwater from fYNOP discharging to Codorus Creek. Surface water attainment is demonstrated using surface water quality data (collected from September 2019 through August 2023) that is below AWQC in the creek using the compliance evaluation method in the approved Cleanup Plan.

4.3.1 Surface Water Evaluation in the Groundwater Risk Assessment

The Groundwater RA (NewFields, 2018) evaluated exposures and risks to receptors contacting surface water in Codorus Creek under WPL groundwater extraction system pumping and non-pumping conditions. The evaluation identified recreational wading as the only complete exposure pathway from Site groundwater entering the creek. After evaluation of this pathway, the Groundwater RA concluded that no unacceptable risk to humans exists by wading in the creek.

4.3.2 Surface Water Quality Data

The Cleanup Plan determined that an applicable or relevant and appropriate requirement (ARAR) for the Site was compliance with Pennsylvania AWQC. Similarly, the FDRTC determined that the Final Remedy for surface water consisted of ensuring that Pennsylvania AWQC are met within the creek. Therefore, Codorus Creek was monitored in accordance with the Cleanup Plan to determine potential impacts from COCs migrating from fYNOP to the creek, during both WPL groundwater extraction system operation and shutdown.

4.3.2.1 Scope of Surface Water Sampling and Analysis

The Cleanup Plan presented the scope, frequency, objectives, and methods to evaluate data to determine compliance with AWQC at specific points of application in Codorus Creek. To determine sampling locations and application of AWQCs at these locations, the Cleanup Plan considered in-stream mixing, stream geometry, and sensitivity analyses of variables used in the evaluation. Sampling locations and AWQC application assigned to each sampling location determined by the evaluation are shown on **Figure 4.3-1** and **Table 4.3-1**, respectively.

COCs in surface water were determined by magnitude of chemical concentration, detection frequency, and comparison to applicable AWQC. Site-related COCs for the creek are PCE, TCE, cis12DCE, and VC. **Table 4.3-2** provides the AWQC for each surface water COC (i.e., Fish and Aquatic Life criteria and Human Health criteria). The published human health criteria for PCE, TCE, and VC changed in July 2020 (after publication of the Cleanup Plan) from 0.69 µg/L to 10 µg/L for PCE, from 2.5 µg/L to 0.6 µg/L for TCE, and from 0.025 µg/L to 0.02 µg/L for VC. The criteria for cis12DCE did not change. The AWQC for VC is lower than can be reliably achieved using Pennsylvania-certified analytical methods. In these situations, the analytical method quantitation limit (QL) and applicable reporting limit (RL) are used to determine compliance (i.e., 1.0 µg/L for samples collected prior to May 2020 and 0.5 µg/L for samples collected on and after May 2020).

Surface water monitoring procedures used to collect and analyze data are described in the FSP (GSC, 2012b) and the QAPP (GSC, 2020a). Copies of the FSP and the QAPP are available on the public website, https://yorksiteremedy.com.

Monthly surface water samples were collected from 12 locations in Codorus Creek shown on **Figure 4.3-1**. Three focused diffuse groundwater discharge locations (COD-SW-15, COD-SW-17, and COD-SW-26) and nine surface water sampling locations downstream of diffuse discharge locations (COD-SW-6, COD-SW-7, COD-SW-8, COD-SW-9, COD-SW-13, COD-SW-16, COD-SW-27, COD-SW-28, and COD-SW-29) were sampled. Surface water sample collection and field measurement documentation with the WPL extraction system off (September 2021 through August 2023) are in **Appendix H**.

The surface water samples were analyzed for the project analyte list VOCs in the QAPP using SW-846 Method 8260C or 8260D. Laboratory analytical reports for the samples are in **Appendix I**. During surface water sampling and analysis, the MDL changed from 0.06 µg/L to 0.2 µg/L for PCE, from 0.06 µg/L to 0.08 µg/L for TCE, and from 0.05 µg/L to 0.08 µg/L for cis12DCE. The MDL for VC (0.1 µg/L) did not change. The laboratory DQA is described in Groundwater and Surface Water Monitoring Reports (GSC, 2020b, 2021, 2022b and 2023b).

4.3.2.2 Precipitation and Hydrology Results

Figures 4.3-2 and **4.3-3** provide published United States Geological Survey (USGS) average daily stream flow rates (referenced to by USGS as discharge rates) of Codorus Creek for the York and Pleasureville gaging stations with the WPL groundwater extraction system off. As shown on **Figure 4.3-3**, no data is available for the Pleasureville gaging station after November 16, 2021, because the station is no longer recording flow data. The two stations bracket the Site with the York station located 4.3 miles upstream of the Site and the Pleasureville station located 4.1 miles downstream (**Figure 4.3-4**).

As shown on **Figures 4.3-2** and **4.3-3**, sampling occurred over varying creek flows and both gaging stations show similar magnitudes and ranges of flow where concurrent flow data was recorded during the 24-month sampling period (September 1 through November 16, 2021). Average daily flows in Codorus Creek for the York station on the sampling dates ranged from 65 to 448 cubic feet per second (cfs) (**Table 4.3-3**). The calculated harmonic mean average daily flow (Q_h) for the 24-month sampling period was 129 cfs for the York station (**Figure 4.3-2**). **Table 4.3-4** provides published stream discharge statistics for the gaging stations and Q_h and lowest seven-day average flow that occurs once every ten years (Q7-10) are shown on **Figure 4.3-2** (82.1 cfs and 24 cfs, respectively)

and **Figure 4.3-3** (117 cfs and 35.5 cfs, respectively), calculated using the USGS StreamStats software.

Table 4.3-5 presents precipitation data for the York Airport weather station between January 2017 and August 2023. Based on a comparison of measured precipitation amounts with published normal monthly precipitation, four months were greater than normal, and 20 months were less than normal during the 24-month period of surface water sampling. The annual (September to August) precipitation amounts during surface water sampling (37.4 inches from September 2021 to August 2022 and 28.5 inches from September 2022 through August 2023) is less than the published normal annual precipitation value (42.1 inches).

4.3.2.3 Data Representativeness

As shown on **Figure 4.3-2** (York station), surface water samples were collected over a representative range of flows (from 65 cfs [August 2023] to 448 cfs [September 2021]). Due to the sample collection schedule and short duration of peak flows, samples were not collected during some higher creek flows.

Over a 24-month period, surface water quality data was collected during varying precipitation and stream flows that represent typical seasonal variations in Codorus Creek. Therefore, the monthly samples were collected during conditions that represent typical flow variability in Codorus Creek and normal monthly precipitation amounts.

4.3.2.4 Analytical Results

Table 4.3-6 contains the COC surface water analytical results for 24 monthly sampling events in Codorus Creek. COCs were detected at all sampling locations at low concentrations. Out of the 288 samples analyzed, PCE was detected in 222 samples, TCE was detected in 266 samples, cis12DCE was detected in 253 samples, and VC was detected in three samples (COD-SW-17 shown on **Figure 4.3-1**). The highest PCE, TCE, cis12DCE, and VC concentrations were detected at sampling location COD-SW-17. The following describes the concentration range of detected COCs at the sampling locations:

- Detected PCE concentrations range from 0.061 J µg/L to 140 µg/L,

- Detected TCE concentrations range from 0.064 J µg/L to 11 µg/L,
- Detected cis12DCE concentrations range from 0.053 J µg/L to 5.7 µg/L, and
- Detected VC concentrations range from 0.11 J µg/L to 0.18 J µg/L.

From the nine surface water sampling locations downstream of discharge locations (COD-SW-6, COD-SW-7, COD-SW-8, COD-SW-9, COD-SW-13, COD-SW-16, COD-SW-27, COD-SW-28, and COD-SW-29), COC detections comprise 62% of the total COCs detected while comprising 75% of the total samples analyzed. The maximum detected concentrations of PCE (1.8 µg/L), TCE (0.35 J µg/L), and cis12DCE (0.68 µg/L) in samples from the nine downstream locations are lower than applicable AWQC on **Table 4.3-2** (i.e., two to three orders of magnitude lower than the most restrictive fish and aquatic life criteria for PCE and TCE (140 µg/L and 450 µg/L, respectively) and 2 to 18 times lower than the most restrictive human health criteria for PCE, TCE, and cis12DCE (10 µg/L, 0.6 µg/L, and 12 µg/L, respectively).

4.3.2.5 Compliance Determination

Table 4.3-7 presents a comparison of AWQC with the COC analytical results at points of application in Codorus Creek. Reported COC concentrations were below the AWQC at each sampling location during the 24 monthly sampling events (September 2021 through August 2023). The result of this comparison indicates that compliance was maintained for all surface water COCs at all sample locations with the WPL groundwater extraction system shut down.

4.3.2.6 Summary

Surface water monitoring was conducted monthly (September 2019 through August 2023) in accordance with the Cleanup Plan. Analytical data from samples collected during varying stream flows and precipitation amounts, representative of normal conditions, show that COC migration from fYNOP causes no adverse impacts to Codorus Creek. These data verify compliance with AWQC in the creek and that operation of the WPL groundwater extraction system is not currently necessary to meet AWQC.

Continued monitoring of surface water quality in Codorus Creek with the WPL groundwater extraction system off will be conducted in accordance with the PRCP discussed in Section 5 of this report.

4.4 RCRA Corrective Action Complete with Controls and Closure of SWMUs and AOCs

The investigation and remediation detailed in this Final Report are being submitted to both PADEP and USEPA pursuant to the One Cleanup Program. Throughout the remediation process, all plans and reports submitted to the agencies for review and comment/approval have satisfied both Act 2 and RCRA Corrective Action procedural requirements and have been substantially compliant with the NCP. In some instances, program specific documents have been submitted to or issued by the agencies (e.g., USEPA's Statement of Basis and FDRTC are purely RCRA corrective action process documents, and the Cleanup Plan is an Act 2-only document, but both work together to form the basis of the Final Remedy and Act 2 attainment). These submissions and the data contained in this Final Report satisfy the essential milestones of the RCRA Corrective Action cleanup process, including site investigation, interim action, risk assessments, evaluation of remedial alternatives, and implementation of the selected remedy.

The FDRTC sets forth USEPA's Corrective Action Objectives (Section 4) and the selected Final Remedy (Section 5) for each media of concern at the Site (soils, groundwater, surface water, and subsurface vapor) as well as additional requirements that are not specific to a particular media of concern. With only the exception of soils in the East Campus MMRP Cleanup Area, this Final Report demonstrates full satisfaction of all elements of the Final Remedy and includes the draft Environmental Covenants to implement the Final Remedy and its engineering and institutional controls in **Appendix A**. While the Final Report is prepared substantially in the form and content pursuant to the PADEP TGM and seeks liability protection pursuant to Section 501 of Act 2, the Final Report is also requesting (and has demonstrated) a Partial Corrective Action Complete with Controls determination by USEPA pursuant to RCRA for the Act 2 Site and all media of concern excepting only soils within the East Campus MMRP Cleanup Area.

The Partial Corrective Action Complete with Controls determination will also serve to close out/certify closure of all SWMUs and AOCs identified on **Table 1.2-1**. The SWMUs and AOCs were identified by USEPA on both the East and West Campus properties. Since that time, with redevelopment of the East Campus, nearly all SWMUs and AOCs were removed and investigated as part of the larger fYNOP Corrective Action. Several SWMUs were previously certified as closed, and they are identified as such on **Table 1.2-1**. The remaining SWMUs and AOCs located outside of

the East Campus MMRP Cleanup Area are fully addressed through this Corrective Action process rather than certification of closure of the individual SWMUs and AOCs. As such, this Final Report certifies closure of the remaining SWMUs and AOCs identified in **Table 1.2-1**, outside of the East Campus MMRP Cleanup Area.[2]

[2] The closure of the SWMUs located within the MMRP Cleanup Area will be addressed through the submission of a separate final report/corrective action completion for soils in the MMRP Cleanup Area.

5 POST-REMEDIATION CARE PLAN

This summary of the PRCP in **Appendix J** of this report identifies activities to be performed in accordance with 25 Pa. Code Chapter 250.411(d) and 250.204(g) of the Act 2 Regulations and the USEPA FDRTC. The PRCP activities are necessary to attain and maintain the selected remediation standard under Act 2 and to maintain the Final Remedy under the FDRTC as provided in this Final Report. The PRCP activities will be implemented through Environmental Covenants for the East and West Campus properties, with primary reporting and off-Site activities attached to the East Campus Environmental Covenant. The fYNOP Team proposed the elements of this PRCP in the Cleanup Plan that was approved by PADEP and USEPA in 2020.

The PRCP includes the following:

- Reporting of instances of nonconformity;
- Reporting of measures to correct nonconformity conditions;
- Monitoring and reporting that demonstrates the continued effectiveness of the remedy and reporting of monitoring results and analyses;
- Maintaining records of monitoring, sampling, analysis, and measures to correct nonconformity conditions; and
- Operating and maintaining the controls and submission of proposed changes.

Documentation of ongoing post-remediation care activities will be provided to PADEP and USEPA in annual PRCP reports. The following Sections summarize the PRCP obligations for the Site.

5.1 Engineering Controls

Engineering controls are used to attain and maintain selected regulatory standards for soil and groundwater. Activities performed to provide required post-remediation care for these engineering controls are discussed below.

5.1.1 Monitoring and Maintenance of Caps

Monitoring and maintenance of caps will be conducted to evaluate and document the effectiveness for direct contact prevention caps on the East and West Campus properties. Cap monitoring and maintenance activities are summarized below and detailed in the PRCP.

Future activities that adversely affect cap integrity will be restricted by implementation of the intrusive activity and waste management controls in the PRCP, annual cap inspections, and annual confirmation of cap integrity inside the ERLC warehouse building by the property owner. If material damage to a cap is observed or reported, corrective action necessary to mitigate the breach will be undertaken and documented. Upon discovery of a cap breach, one or a combination of the following corrective measures will be used:

- Repair or replace the cap; or
- Evaluate available or new soil data to demonstrate that the remediation standard is attained and can be maintained in the future without the use of the cap. If this measure is selected, proper documentation will be submitted for regulatory agency written approval.

5.1.2 Monitoring and Maintenance of SPBA Groundwater Extraction and Treatment System

The SPBA Groundwater Extraction and Treatment System will continue to be used to mitigate potential vapor intrusion in the SPBA. Activities required to meet the performance objective for the SPBA Groundwater Extraction and Treatment System consist of ongoing operation, monitoring, and maintenance described in the Groundwater Extraction and Treatment System Operations and Maintenance Manual (Hydro-Terra Group [HTG], 2022). A summary of the operation, monitoring, maintenance, and reporting activities for the extraction and treatment system is provided as follows:

- Inspections, preventative maintenance, cleaning, and repairs.
- Responding to system shutdowns and alarms.
- Monitoring of extraction well pumping rates and treatment processes.
- Sampling of system influent and effluent water.
- Monitoring of groundwater levels and sampling of wells.

- Reporting of system compliance monitoring (PADEP Industrial Wastewater [Groundwater Cleanup] NPDES Permit, PADEP Air Quality State Only Operating Permit, and Susquehanna River Basin Commission [SRBC]).
- Reporting of annual system performance (PADEP Chapter 110, Water Allocation, Water Management Plan Water Withdrawal and Use Reporting as applicable).

Wells used to monitor extraction system performance are highlighted on **Figure 5.1-1**. Water level elevations in wells will be measured and evaluated quarterly to confirm the groundwater gradient objective. Groundwater samples will be collected quarterly for VOC analysis to monitor groundwater chemistry from active extraction wells CW-21, CW-22, and CW-23 and off-Site monitoring wells MW-166, MW-167, and MW-168 located to the south of the SPBA along Canterbury Lane. Samples of the combined influent from the extraction wells will be collected and analyzed quarterly for VOCs to monitor mass removed by the extraction system.

Monitoring for treatment system effluent limitations in accordance with the Industrial Wastewater NPDES permit will be completed for Outfall 003 to demonstrate it remains in compliance with discharge requirements for NPDES permit No. 0085677. Treatment system compliance reporting includes routine monthly and quarterly NPDES permit reports – Discharge Monitoring Reports (DMRs), quarterly SRBC reports if and as required, a SRBC Five Year Flow Meter Calibration report, an annual operations report, an annual PADEP groundwater withdrawal report if and as required, and an annual off gas summary report.

Quarterly and annual progress reports documenting SPBA system effectiveness will be prepared and submitted to PADEP and USEPA. Modifications to the scope and frequency of the monitoring will be proposed to PADEP and USEPA in annual Post-Remediation Care Reports.

5.1.3 Monitoring and Maintenance of WPL Groundwater Extraction and Treatment System

Operation of the WPL Groundwater Extraction and Treatment System collects Site-impacted groundwater flowing toward Codorus Creek to meet AWQC in the creek. The AWQC are currently being met in the creek and, accordingly, operation of the WPL extraction system is not required at this time.

Monthly surface water sampling of Codorus Creek will be performed in accordance with the PRCP. Surface water compliance will be determined by comparing the sampling results from each of the surface water sampling locations to the AWQC shown on **Table 4.3-2**. As noted in Sections 1.2 and 4.3, Site-impacted groundwater discharges diffusely to Codorus Creek under natural hydraulic conditions. For this reason, surface water compliance is being demonstrated with monthly sampling at 12 locations along an approximate 1.3-mile reach of Codorus Creek. This is different than many surface water compliance scenarios which involve direct (end of pipe) stormwater or wastewater discharge to a surface water body.

The WPL groundwater extraction system will be restarted and operated if surface water sampling results indicate COC concentrations greater than the then-current AWQC or QL (whichever is higher) in two consecutive monthly sampling events.

During WPL system operation, monitoring and maintenance will be conducted in accordance with procedures described in the Cleanup Plan and an updated version of the Groundwater Extraction and Treatment System Operations and Maintenance Manual that was modified to process water from the SPBA extraction system only (HTG, 2022).

WPL system performance objectives in the Cleanup Plan will be monitored and evaluated consistent with the procedures in the PRCP that consist of the following:

- Annual water level measurements in wells to confirm the groundwater gradients developed by pumping,
- Monthly average system pumping rates for comparison to design rates determined during system testing in 2015,
- Quarterly groundwater samples to monitor VOC concentrations from active extraction wells CW-9, CW-13, CW-15A, CW-17, and CW-20, and
- Quarterly samples of the combined influent from the extraction wells to monitor VOC mass removed by the extraction system.

Treatment system monitoring and reporting will be conducted consistent with the procedures described in Section 5.2.1.

Annual progress reports documenting WPL system effectiveness will be prepared and submitted to PADEP and USEPA for any year in which the system is operated. Modifications to the scope and frequency of the monitoring will be proposed to PADEP and USEPA in annual PRCP reports.

5.1.4 Monitoring and Maintenance of Vapor Barrier

The vapor barrier beneath the ERLC warehouse mitigates the potential for intrusion of vapor containing COCs from soil and groundwater into the building. Monitoring of the warehouse concrete slab covering the vapor barrier consists of documentation from the owner of the property that confirms the slab over the vapor barrier is intact. Integrity of the vapor barrier is assumed if the slab is intact. Inspection and maintenance procedures for this control are discussed in the PRCP.

5.2 Institutional Controls

Periodic assessments of land and groundwater use and periodic notification of nearby property owners regarding potentially complete exposure pathways to utility workers are institutional controls used to maintain the selected remediation standard. Periodic assessments and notifications will be performed annually, and documentation of the assessments and notifications will be included in the annual PRCP report.

If the assessment and notification activities document a change in land and/or groundwater use, an evaluation of the potential risk based on then-current conditions will be the initial corrective measure to address the discovery. Additional corrective action activities may be performed as necessary in consultation with PADEP and USEPA.

5.2.1 Assessment of Non-Residential Land Use

Current land use on the East and West Campuses (LUA 1, LUA 2, and LUA 3) is non-residential. The West Campus and K. G. Whiteford Ltd. property (the former Cole Steel and Pfaltzgraff Company manufacturing facilities in LUA 5) have activity-and-use limitations in their existing Environmental Covenants that prohibit future residential land use. The Environmental Covenant for the East Campus will restrict the use of the property to non-residential, only.

The Groundwater RA determined that exposure to COCs in shallow groundwater in a residential scenario is unacceptable in LUA 6. As shown on **Figure 1.1-2**, LUA 6 contains undeveloped land,

railroad tracks, and a rail trail between the Site and Codorus Creek. Assessment of potential land use changes in LUA 6 will be performed by inspection and/or observation using unmanned aircraft system (drone) technology. Assessment documentation will be reviewed to verify continued non-residential use (undeveloped [tree or grass-covered] with no buildings) in LUA 6. The results of this assessment will be reported in annual PRCP reports.

5.2.2 Assessment of Continued Non-Use of Groundwater

Groundwater is currently only used for environmental sampling and remediation on the East and West Campuses and surrounding properties shown on **Figure 1.1-2**. The West Campus and former K. G. Whiteford Ltd. properties have activity-and-use limitations in their existing Environmental Covenants that prohibit the use of groundwater. The Environmental Covenant for the East Campus will include restrictions prohibiting the use of groundwater for drinking and agricultural purposes without the written approval of PADEP and USEPA.

Assessment to verify continued non-use of groundwater for potable purposes will be performed by the owner of the East Campus in LUA 4, LUA 5, and LUA 6. The assessment will consist of reviewing available public records to identify potential changes to groundwater use and communicating with the local water supplier to confirm non-use of groundwater. Public records of water well data for the assessment area will be obtained from the Pennsylvania Groundwater Information System (PaGWIS) currently maintained by the Pennsylvania Department of Conservation and Natural Resources (DCNR) Bureau of Geological Survey. Well data compiled from the PaGWIS records search will be compared to well data in the Updated Water Use Survey Report for fYNOP (GSC, 2018b) to determine if new wells have been installed in the assessment area. A letter will be sent to the local water provider, currently The York Water Company, requesting confirmation that they do not have water supply wells operating in the assessment area. The results of this assessment will be included in annual PRCP reports.

5.2.3 Assessment of Potential Vapor Intrusion into Future Inhabited Spaces

A vapor intrusion pathway evaluation and/or presumptive mitigation measures (e.g., vapor barrier or sub-slab depressurization system) are required prior to construction of any new inhabitable structure in LUA 1, LUA 2, and LUA 3. The goal is to prevent potential intrusion of vapor containing COCs from soil and groundwater into inhabited space. The Environmental Covenants for the East and West

Campus properties will include these obligations. These activities will be documented in annual PRCP reports.

5.2.4 Intrusive Activity and Waste Management Limitations and Controls

A plan governing intrusive activities (e.g., digging, excavating, drilling, grading, pile driving, and or removal of ground cover materials) in LUA 1, LUA 2, and LUA 3 is provided in the PRCP (soil management plan). The goal is to prevent exposure of contaminated soil, shallow groundwater, and soil/shallow groundwater vapor to workers performing intrusive activities in these LUAs and to control the handling of soil and waste materials encountered during intrusive activities.

5.2.5 Periodic Notification Regarding Potential Exposure to Utility Workers

The Groundwater RA identified the potential for utility worker exposure to shallow impacted groundwater during excavation activities on the K. G. Whiteford Ltd. property in LUA 5 and the properties in LUA 6. This potential exposure pathway has been eliminated by notifying the property owners in LUA 5 and LUA 6 of the potential for exposure. The Environmental Covenant for the East Campus will include the obligation for the periodic notification on these properties.

Letters will be sent to each property owner of record suggesting the need for reasonable caution in planning and conducting intrusive underground utility work and requesting they contact the current owner of the East Campus property if utility work is anticipated on the property. The municipality and the public water and sewer providers operating within the municipality will be copied on the notification letters. The notification letters and documentation of receipt will be included in annual PRCP reports.

When notified by a landowner of utility construction on a property, the owner of the East Campus property will evaluate current environmental conditions and provide notice to the landowner regarding the need for measures to protect human health and the environment during the utility work.

5.3 Groundwater Monitoring

Monitoring demonstrates attainment of the Act 2 SSS for groundwater at the Site and completion of the Final Remedy for groundwater set forth in the FDRTC (Section 5.B.). Groundwater monitoring will be continued under this PRCP to (a) verify fate and transport assumptions and (b) monitor the

progress of MNA toward the resource restoration objective for areas of fYNOP outside of the TI Areas. As discussed in the MNA Section of the PRCP, monitoring data will be evaluated and reported annually. The obligation for groundwater monitoring will be memorialized in the Environmental Covenant for the East Campus.

The groundwater monitoring will be conducted following the scope of groundwater sampling in Section 4.2.1 of this report. Wells to be monitored are shown on **Figure 4.2-1**. Water level measurements from available wells will be collected annually and used to verify groundwater gradients. Groundwater samples will be analyzed for VOCs on an annual frequency. The sample from MW-2 will also be analyzed for total and available cyanide to monitor concentrations in the vicinity of the former cyanide spill area. A listing of in-place access agreements to perform the groundwater monitoring is on **Table 5.3-1**.

PRCP monitoring results will be evaluated in accordance with the Monitored Natural Attenuation and Data Analysis Plan and results will be documented in annual PRCP reports.

The monitoring well network and frequency of monitoring may be modified as goals are achieved or changed. Potential modifications will be evaluated periodically based on annual post-remediation care monitoring results. Proposed changes in groundwater monitoring will be submitted for written approval by PADEP and USEPA prior to implementation. As a general matter, groundwater sampling will continue until the MCL/RSL are met outside of the TI Areas unless earlier termination is approved by USEPA in writing.

5.4 Surface Water Monitoring

Monitoring results demonstrate attainment for surface water and implementation of the surface water Final Remedy by documenting compliance with AWQC in Codorus Creek under both WPL extraction system pumping and non-pumping conditions. PRCP monitoring of surface water will be performed by the owner of the East Campus and documented to verify continued compliance with AWQC in Codorus Creek.

PRCP surface water monitoring will follow the process described in Section 4.3 of this report. Surface water samples will continue to be collected monthly during WPL extraction system shutdown.

Monitoring results will be documented in annual PRCP reports. Potential modifications to the scope and frequency of surface water monitoring will be evaluated periodically, every year at a minimum, based on the monitoring results. Proposed changes in surface water monitoring will be submitted for written approval by PADEP and USEPA prior to implementation.

6 COOPERATIVE AGREEMENTS OF THIRD PARTIES

Access agreements that are required to conduct remedy activities on off-Site properties are listed on **Table 5.3-1**. Copies of the access agreements are available upon request.

7 COMMUNITY INVOLVEMENT AND PUBLIC COMMENTS

7.1 Public Information and Involvement Plan

In 2004, a Public Information and Involvement Plan (PIIP) was developed and implemented for the fYNOP. The objective of the PIIP was to establish a forum and procedures for informing the community of the findings of the planned and future investigation and remedial activities at fYNOP. The PIIP presents a summary of Site history, previous work activities, and proposed future activities, community profile, and demographics. The PIIP includes stakeholders, plan objectives and responsibilities, and public information and involvement techniques. The PIIP has been routinely updated and a copy of the most recent version, dated July 2019, is included in **Appendix K**.

On June 23, 2004, a public meeting, facilitated and led by fYNOP representatives, was held at a public meeting room near fYNOP. The meeting presentation provided a summary of work completed and the anticipated path forward to the final Site cleanup. Various news publications notifying the public of the meeting and summarizing the meeting discussions were published in *The York Daily Record*. A similar presentation was also provided to interested employees at the Harley-Davidson plant. No concerns were voiced during the Public Meeting or the meetings with Harley-Davidson employees. As part of the PIIP, a community hot line was established in 2004. To date there have been 48 calls to the hotline, but there have been no calls since January 2015. The fYNOP Team has responded in a timely manner to all calls to the hotline.

During 2004, an information repository was established at the Martin Library. The repository was maintained for several years. During 2005, a website (https://yorksiteremedy.com/) was established to serve as the information repository for the public, and ultimately replaced the information repository at Martin Library. The website has been continuously maintained and updated by the fYNOP Team from 2005 through present.

The fYNOP Team has also issued annual newsletters to the nearby community and stakeholders to date. The first newsletter was issued in 2004 and the most recent was issued in 2022. After approval of this Final Report and during implementation of the PRCP, information on the project will be periodically communicated via the public website.

In addition to the community involvement activities previously discussed, the fYNOP Team also conducted focused communications with adjacent property owners during activities performed near the fYNOP northern and southern property boundaries. These communications have consisted of door-to-door discussions, and mailing flyers and letters to the community as outlined in the PIIP.

7.2 Municipal and Public Notifications for Act 2 Submittals

On February 7, 2005, a Notice of Intent to Remediate (NIR) soil and groundwater at the fYNOP was provided to PADEP. The NIR specified remediation would be to the SSS. The York County Planning Commission and Springettsbury Township were notified in writing of the NIR (which included a copy of the NIR) on February 28, 2005. Receipt of the NIR was published by PADEP in Pennsylvania Bulletin (35 Pa. B. 1780, volume 35, No. 12) on March 19, 2005. On March 24, 2005, the legal notice for the NIR was published in the daily newspapers of general circulation in York (*The York Dispatch/York Sunday News* and *The York Daily Record*). Springettsbury Township did not request to be involved in the development of the remediation and reuse plans for the Site.

Various technical reports have been submitted under the Act 2 Program for the Site (e.g., SRI Soil Report (SAIC, 2009), Soils RA (GSC, 2012a), Part 2 SRI (GSC, 2018a), Groundwater RA (NewFields, 2018), Proposed Plan-Final Remedy (GSC, 2019b), and Cleanup Plan (GSC, 2019a)), along with the associated municipal and public notifications for the reports.

No comments on the NIR and technical reports were received from the public, county, or the municipality. Following submittal of the Cleanup Plan in November 2019, USEPA issued the Statement of Basis for the proposed remedy in December 2019 (USEPA, 2019). The public comment period on the proposed remedy was advertised in *The York Daily Record* and on the USEPA Region III website. USEPA received 13 comments on the Statement of Basis during the public comment period (all comments were from the fYNOP Team). Consequently, USEPA made minor changes to the Statement of Basis and selected the final remedy for fYNOP in the FDRTC issued in February 2020 (USEPA, 2020).

Copies of the NIR, technical reports, municipal notifications and newspaper proof of publications are located on the public website, https://yorksiteremedy.com.

The fYNOP Team completed municipal and public notices for this Act 2 Final Report submittal. Documentation for the notices, a letter to the local municipality (Springettsbury Township), and public (newspaper) notice are in **Appendix L**.

8 SIGNATURES

Signatures and seals for the registered professional geologists who prepared this Final Report are provided on the signature sheet included before the table of contents.

9 REFERENCES

ARM Group, Inc. (ARM), 2016. Soil Gas Sampling and Vapor Intrusion, Former Harley Davidson West Campus Site, 1445 Eden Road, Springettsbury Township, York County, PA, May.

EA Engineering, Science, and Technology, Inc., PBC (EA), 2019. Military Munitions Response Program Cleanup Plan for the Former York Naval Ordnance Plant, 1425 Eden Road, Springettsbury Township, York, Pennsylvania, November.

Groundwater Sciences Corporation (GSC), 2012a. Soils Risk Assessment – Former York Naval Ordnance Plant, March.

GSC, 2012b. Field Sampling Plan for Part 2 of the Supplemental Groundwater Remedial Investigation at the former York Naval Ordnance Plant in York, Pennsylvania, April.

GSC, 2012c. Quality Assurance Project Plan, Former York Naval Ordnance Plant, 1425 Eden Road, York, Pennsylvania, June.

GSC, 2014. Quality Assurance Project Plan, Former York Naval Ordnance Plant, 1425 Eden Road, York, Pennsylvania, Rev. 1, August.

GSC, 2018a. Supplemental Remedial Investigation Groundwater Report (Part 2) Former York Naval Ordnance Plant, August 2016 and Revised March 2018.

GSC, 2018b. Updated Water Use Survey Report, Former York Naval Ordnance Plant, 1425 Eden Road, Springettsbury Township, York, Pennsylvania, March 2018 and Revised September 2018.

GSC, 2019a. Site-Wide Cleanup Plan, Former York Naval Ordnance Plant, 1425 Eden Road, Springettsbury Township, York, Pennsylvania, November.

GSC, 2019b. Proposed Plan-Final Remedy, Former York Naval Ordnance Plant, 1425 Eden Road, York, Pennsylvania, July.

GSC, 2019c. Southern Property Boundary/South Plume Areas Supplemental Remedial Investigation and Interim Groundwater Remediation Report, Former York Naval Ordnance Plant, 1425 Eden Road, York, PA, November 2018 and Revised February 2019.

GSC, 2020a. Quality Assurance Project Plan, Former York Naval Ordnance Plant, 1425 Eden Road, York, Pennsylvania, Rev. 2, November.

GSC, 2020b. Groundwater and Surface Water Monitoring Report for 2019, Former York Naval Ordnance Plant, 1425 Eden Road, Springettsbury Township, York, Pennsylvania, July.

GSC, 2021. Groundwater and Surface Water Monitoring Report for 2020, Former York Naval Ordnance Plant, 1425 Eden Road, Springettsbury Township, York, Pennsylvania, July.

GSC, 2022a. Surface Water Compliance Report, Former York Naval Ordnance Plant, 1425 Eden Road, Springettsbury Township, York, Pennsylvania, January.

GSC, 2022b. Groundwater and Surface Water Monitoring Report for 2021, Former York Naval Ordnance Plant, 1425 Eden Road, Springettsbury Township, York, Pennsylvania, July.

GSC, 2023a. Waiver Request from Environmental Covenant, Former York Naval Ordnance Plant (fYNOP), York, PA, October.

GSC, 2023b. Groundwater and Surface Water Monitoring Report for 2022, Former York Naval Ordnance Plant (fYNOP), 1425 Eden Road, Springettsbury Township, York, Pennsylvania, July.

Hydro-Terra Group (HTG), 2022. Groundwater Extraction and Treatment System Operations and Maintenance Manual, October 2019 and Revised October 2022.

Key Reporters, 1991. Video Deposition of Luther Franklin Myers, April.

Newfields, 2018. Revised Groundwater Human Health Risk Assessment, Former York Naval Ordnance Plant, November 2016 and Revised March 2018.

Pennsylvania Department of Environmental Protection (PADEP), 2002. PADEP Land Recycling Program Technical Guidance Manual, June.

PADEP, 2021. PADEP Land Recycling Program Technical Guidance Manual, March.

Science Applications International Corporation (SAIC), 2009. Draft Supplemental Remedial Investigations Soil Report Former York Naval Ordnance Plant, December.

United States Environmental Protection Agency (USEPA), 2019. Statement of Basis, Former York Naval Ordnance Plant, 1245 Eden Road, York, Pennsylvania, December.

USEPA, 2020. United States Environmental Protection Agency, Region III, Final Decision and Response to Comments, Former York Naval Ordnance Plant, 1425 Eden Road, York, Pennsylvania, EPA ID No. PAD 001643691, February.

USEPA, 2022. ProUCL Version 5.2.0 User Guide, Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations, June.

USEPA, 2022. Email from Kristin Koroncai of USEPA to Ralph Golia of AMO and Jim Rea of PADEP, fYNOP West Parking Lot Groundwater Treatment System Shut-Down Test Update, September.

Tables

TABLE 1.2-1
Summary of Solid Waste Management Units and Areas of Concern
Former York Naval Ordnance Plant - York, PA

Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs)	
Identification	**Description**
Building 2 Former TCA Tank Area and Vapor Degreaser (SWMU 1)	Previously located along the western side of former Building 2. The area included the former Building 2 1,1,1-Trichloroethane (TCA) Tank Area and the former Building 2 Vapor Degreaser. Building 2 was demolished during 2011.
Former TCA Tank Area	Former location of a 2,500 gallon TCA above ground storage tank and fill removed from service in 1994.
Building 2 Vapor Degreaser	The vapor degreaser was located several hundred feet to the east of the TCA storage tank and has not been identified as a SWMU. Historical information revealed that trichloroethene (TCE), tetrachloroethene (PCE), and TCA had been used in this degreaser. The degreaser was replaced with an aqueous based degreaser unit in 1994.
Old Waste Containment Area (OWCA) (SWMUs 2-11) (*)	Located to the north of former Building 41, this area was formerly used as an interim hazardous waste handling and storage facility and consisted of a bermed unloading/loading area and six storage tanks. The facilities were removed in 1995. Certification of Closure issued to Pennsylvania Department of Environmental Protection (PADEP) by Science Applications International Corporation (SAIC) in June 2000.
Building 41, North Access Road	Southern extent of OWCA in area of former roadway between the structures at the OWCA and former Building 41 to the South.
Toluene Spill Ditch Dredging	In 1986 a toluene spill occurred at the OWCA and was discharged through a storm sewer line to the unnamed tributary historically referred to as Johnson's Run.
Northern Property Boundary Area (NPBA) (SWMU 12)	The NPBA was the reported site of liquid waste disposal in the form of road oiling, weed control along the perimeter fence, and rodent control. A groundwater extraction system was operated from November 1990 until shutdown in June 2013.
Southern Property Boundary Area (SPBA) (SWMU 13)	The SPBA was the alleged site of liquid waste disposal in the form of road oiling and weed control along the perimeter fence. Also included in this AOC are the Sanitary Sewer Area and a former drum storage area. A groundwater extraction system began operating in October 2018.
SPBA, Sanitary Sewer Area	This area was the reported site of liquid waste disposal in the form of road oiling and weed control along the perimeter fence. During 2002, sanitary sewer construction in this area revealed VOC impacted soils. Removal of contaminated soil was completed during construction, and a report of the remedial activities was completed by SAIC in April 2003.
SPBA, Drum Storage Area	This area bounds both sides of the service road extending south from Buildings 13 and 70 and historical information indicates that this area was used for drum storage. Building 13 was demolished in 2010/2011.
Western Property Area (SWMU 14)	The Western Property Area (WPA) is defined as the portion of the property west of the original Eden Road and fenced Plant Area and includes the Burn Pile Area, West Parking Lot, Former Electrical Substation and the area west of the West Parking Lot. Investigations began prior to relocation of Eden Road over this area in 2004, and were summarized in the Supplemental Remedial Investigation (SRI) Soil Report (SAIC, 2009).
Burn Pile Area	The Burn Pile Area was used for waste disposal of liquid and solid waste at least into the 1960s. Investigations began prior to relocation of Eden Road over this area in 2004, and were summarized in the SRI Soil Report (SAIC, 2009).
West Parking Lot (WPL)	The West Parking Lot was used for waste disposal of liquid and solid waste at least into the 1960s, prior to parking lot construction. A groundwater extraction system was operated in the WPL from May 1994 until shutdown in August 2021.

Green rows represent AOCs identified during fYNOP investigations.

TABLE 1.2-1
Summary of Solid Waste Management Units and Areas of Concern
Former York Naval Ordnance Plant - York, PA

Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs)	
Identification	**Description**
Former Electrical Substation	This area was formerly used as a coal storage area.
North End Test Track (NETT) (SWMU 15)	The North End of the Test Track was the site of liquid waste storage and disposal, as well as landfilling. Bomb line waste materials (grease), cyanide wastes, fly ash, and vapor degreaser still bottoms, were disposed in this area. Thousands of drums of liquid waste stored in this area during the 1970s were reported to have leaked and spilled, and were later removed in the 1980s.
Magnesium Burn Area	Magnesium disposal was implemented by incineration.
Former Cyanide Spill Area (MW-2) (SWMU 16)	Burial area where cyanide drums were discovered and removed in the late 1980s.
Landfill Area (SWMU 17)	Landfilling area created during ownership by American Machine and Foundry (AMF) in the 1960s.
Former Miscellaneous Disposal Areas (SWMUs 18-21) (+)	These are areas surrounding former Buildings 14 and 16, firing ranges, mostly debris from activities related to these buildings. The areas were discovered in the early 1980s using metal detectors. Located in the Military Munitions Response Program Area (MMRP) Cleanup Area on the East Campus Property.
Former Buried Trash Disposal Area (SWMU 18) (+)	This area appeared to have been the result of burning materials in drums which had later deteriorated and were smashed and buried. Later inspections did not discover any waste materials and it is likely that the materials had been removed and properly disposed after discovery. Located in the MMRP Cleanup Area on the East Campus Property.
Former Nontoxic Sand Disposal Area (SWMU 19) (+)	This was described as a small extension of the eastern landfill. A drum was discovered and the contents were analyzed and discovered to be non-toxic sand. Located in the MMRP Cleanup Area on the East Campus Property.
Former Spent 37mm Shell Disposal Area Nos. 1 & 2 (SWMUs 20 & 21) (+)	Former disposal areas containing fired and exploded 37mm projectiles and sand deposits. Located in the MMRP Cleanup Area on the East Campus Property.
North Building 4, Plating Sludge/Vapor Degreaser Area (SWMU 22) (*)	This area was the location of plating and degreasing operations within former Building 4. Building 4 was demolished in 2011, the degreasers were excavated/remediated and a closure report was issued by SAIC in June 2012.
Northern Vapor Degreaser	Vapor degreasers using chlorinated solvents from the early 1960s until 1994 when the degreasing operations were switched to an aqueous based degreaser. TCE, PCE, and TCA were previously used in the degreasers in this area. This area also previously housed historical plating operations.
Former AMF Degreasers	Two former AMF degreasers and plating tanks. Soil gas results indicate a possible second source for volatile organic compounds (VOCs) separate from the degreasers
Former Methylene Chloride System	Location of a methylene chloride system, a former drum storage area, and a plating chemicals storage area.
Former Southern Degreaser	This is the location of a former vapor degreaser and TCA storage tank.
North Plant Area	The North Plant Area consists of several small SWMUs and AOCs with coalescing study areas.

Green rows represent AOCs identified during fYNOP investigations.

TABLE 1.2-1
Summary of Solid Waste Management Units and Areas of Concern
Former York Naval Ordnance Plant - York, PA

Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs)	
Identification	**Description**
Building 67 Container Storage Area (SWMUs 23-25) (*)	Former interim storage facility for drums containing various waste and defective polychlorinated biphenyls (PCB) transformers and capacitors that consisted of a dedicated container storage area, concrete sump, and adjacent asphalt pad. Certification of closure was issued to PADEP by R. E. Wright Associates, Inc. (REWAI) in July 1992. The Building 67 Container Storage Area was demolished in 2010, and a closure report was issued by SAIC in March 2011.
Mobile Tankers 1 and 2 (SWMUs 26 & 27)	Two 3,500 gallon capacity tankers used to transfer liquid wastes from one unit to another.
Waste Solvent Boilers (Building 10, Power House) (SWMUs 28 & 29)	Two former boilers fueled by waste solvents from 1981-1986. Waste solvents were piped to the boilers from SWMU 2 and for a short time waste solvents from off-site sources were burned as fuel. Building 10 was demolished in 2011.
Former Coal Storage Area - Northwest of Building 10	Location northwest of former Building 10 for coal storage used to fuel the boilers in former Building 10 before 1969.
Industrial Wastewater Treatment Plant, Building 41 (SWMUs 30-42) (*)	Industrial Wastewater Treatment Plant (former Building 41) that includes a series of subsurface tanks for equalization, settling, pH adjustment, and sludge removal. Operations began in 1969. Closure activities were conducted for several of the SWMUs beginning in 2008. Certification of closure of the North basin (SWMU-36) was issued by SAIC in December 2009. Building 41 was demolished in August 2011, and a closure report was issued by SAIC in June 2012.
Former Drum Storage Areas (Buildings 51 & 67) (SWMUs 43-46) (*)	Former Building 51 was used as a 90-day satellite hazardous waste storage area and historically housed two paint sludge dumpsters. A former waste pile where paint sludge was solidified and, for a brief time, mixed with other contaminated soils reportedly was located east of former Building 51 and north of former Building 44. The paint sludges contained hexavalent chromium. In 2011, Harley-Davidson relocated the <90-day hazardous waste storage operations from Building 51 to Building 70, and demolished the building. A closure report was issued by SAIC in June 2012.
Metal Chip Bin Area (*)	Location near former Buildings 43 and 44 where metal chips and shavings from machining operations were placed into concrete structures that retained the metal chips while allowing cutting fluids and oils to drain to underground storage tanks (USTs). The metal chip bin area was demolished in 2010. Remedial activities were conducted, and a closure report was issued by SAIC in March 2011.
Underground Storage Tank T-4	Former 3,500 gallon gasoline underground storage tank (UST) immediately west of former Building 45. The UST and 1,200 tons of impacted soil were removed in 1991.
Former Building 57	Former Building 57 was located just south of former Building 51 and north of former Building 42. The area was used as a metal fabrication shop. Building 57 was demolished in 2011.
Building 2 (East Corridor) former Waste Water Sumps and Cutting Oil Tank (SWMUs 47-52)	Located along the eastern exterior wall of former Building 2, this area was the former location of six in-ground vessels that contained acid and alkaline wastes, chrome rinse water, and cyanide wastes. The tanks were removed in October 2000, and a report was issued by SAIC in September 2001. Building 2 was demolished in 2011.
Former Cutting Oil Tank Area	Location of a former cutting oil tank associated with elevated concentrations of chlorinated solvents in the shallow groundwater and soil.
Building 4 Wastewater Sumps (SWMUs 53-60) (*)	Former location of several unused and two active underground wastewater tanks along the northwest side of former Building 4. Replaced with new aboveground tanks in 2004. Impermeable barrier placed over the tank area to reduce infiltration through soils. Building 4 was demolished in 2011, and a closure report was issued by SAIC in June 2012.

Green rows represent AOCs identified during fYNOP investigations.

TABLE 1.2-1
Summary of Solid Waste Management Units and Areas of Concern
Former York Naval Ordnance Plant - York, PA

Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs)	
Identification	**Description**
Building 2 Settling Tanks (Bomb Line-Heat Treatment) (SWMUs 61 & 62)	Location of two settling tanks used in a former bomb line manufacturing area. The tanks were located inside former Building 2 in the northeast corner and received quench water from hot metal forging operations. The quench water reportedly contained organic solvents. The SWMUs were investigated in 2008, and reported in the SRI Soil Report (SAIC, 2009). Building 2 was demolished in 2011.
Building 2 Sumps, Former Chrome Plater Area (Building 66) (SWMU 63)	This area included sumps surrounding former process areas in former Building 2 that contained degreasers, dust collectors, or electroplating tanks in addition to plating tanks and pits associated with a former chromium and nickel plating facility in the southeast corner of former Building 66. Remediation activities have removed all soils with the exception of three small areas that cannot be reached due to utilities or footers. Building 66 was demolished in 2011.
Building 4 Sumps, Zinc Plater Area (SWMU 64) (*)	This area was located in the northern half of former Building 4 and housed the zinc plating operations from 1981-1995 and prior to 1981, cadmium, chromium, and copper plating operations. Hydrochloric acid and cyanide were used in the plating process. Remedial activities successfully removed all soils the exception of soils directly along and beneath the west wall of former Building 4. Building 4 was demolished in 2011, and a closure report was issued by SAIC in June 2012.
Chrome Plater Scrubbing Tank (Building 66) (SWMU 65)	Chrome plating tank and scrubber for the former chromium and nickel plating facility in former Building 66. Remediation activities have removed all soils with the exception of three small areas that cannot be reached due to utilities or footers. Building 66 was demolished in 2011.
Building 2 Dust Collectors and Accumulation Areas (SWMUs 66, 67, & 72)	Former dust collectors used to filter out particles from air discharged from metal polishing and paint stripping areas within former Building 2 and typically a 55-gallon steel drum accumulation area reportedly located under the dust collection units on concrete. Building 2 was demolished in 2011.
Building 4 Dust Collectors and Accumulation Areas (SWMUs 68-71 & 73)	Former dust collection system used to filter out particles from air discharged from metal polishing and paint stripping areas within former Building 4 and typically a 55-gallon steel drum accumulation area reportedly located under the dust collection units on concrete. Building 4 was demolished in 2011.
Building 40 Hazardous Waste Storage Facility (SWMU 74)	Located to the northwest of the OWCA, this former facility included several aboveground storage tanks under a roofed area, which included a concrete containment sump area for the tanks and truck loading/unloading operations. Building 40 was demolished in 2010.
Fire Water Pond	Pond constructed for use as an on-site source of water for fire fighting purposes.
Electrical Transformer Areas (ETAs) (*)	Numerous electrical transformer stations located throughout the facility where PCB-containing transformers were used in the past. All PCB-containing transformers were removed from the site by 2003. Several ETAs were investigated, with minor removals of PCB-impacted soil and concrete. Buildings 2, 45, 91, and the ETAs were all demolished in 2011, and a report was issued by SAIC summarizing all ETA activities in June 2012.
D-Bank Transformer Area	Three 500-kilovolt-ampere (KVA) transformers located on a concrete pad with a locked fence enclosure along the eastern side of former Building 2. Remedial efforts have removed all PCB-impacted soils and surfaces.
L-Bank Transformer Area	Three transformers located on a concrete pad with a locked fence enclosure at the northeast corner of former Building 2.
C-Bank Transformer Area	Two 500-KVA transformers located on a concrete pad within a locked interior room with no roof between former Buildings 2 and 91. Remedial efforts have removed all PCB-impacted soils and surfaces.
B-Bank Transformer Area	Three 500-KVA transformers located on a concrete pad with a roofed, locked fence enclosure between former Buildings 2 and 91. Mitigated by remedial activities.
H-Bank Transformer Area	Located within a fenced area just west of former Building 45. No historical records of release.
Reforested Area	Wooded Area in the eastern area of the facility where several buried propane tanks and buried cyanide waste were discovered.

Green rows represent AOCs identified during fYNOP investigations.

TABLE 1.2-1
Summary of Solid Waste Management Units and Areas of Concern
Former York Naval Ordnance Plant - York, PA

Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs)	
Identification	**Description**
Eastern Perimeter Road Area	The Eastern Perimeter Road Area was the reported site of liquid waste disposal in the form of road oiling and weed control along the perimeter fence.
Building 2 East Corridor	The former Building 2 East Corridor is the area of the plant on the eastern side of former Building 2 and extends from the southern side of former Building 45 to the north all the way south to the northern side of former Building 13. Buildings 2, 13, 45, and 54 were demolished in 2010/2011.
Building 2 Drum Storage Area (DSA)	Area to the east of former Building 2 and west of the Fire Pond reportedly used for temporary storage of drums containing paint thinner, dry press coolant, solvents, and degreasers.
Building 54	Former Building 54 consisted of three joined Quonset huts located east of the northeast corner of former Building 2. It was also used for lawn mower and outdoor maintenance equipment storage but historical photographs show drum storage occurred along the east side of the building.
Bunkers and Shell Ranges (+)	This area was primarily used for ordnance operations, rocket engine testing, and some industrial uses. Reportedly, liquid wastes were poured onto the ground in the area and historical aerial photographs indicate drum storage occurred to the west of the management unit. Located in the MMRP Cleanup Area on the East Campus Property.
Building 16 Former Firing Pits (Butts) (+)	Sand used as backstop for projectile firing contained lead and projectiles. Sand was removed but dust and residual material remain. Located in the MMRP Cleanup Area on the East Campus Property.
Building 16 Former Degreasers (+)	This is the location of two former degreasers, based on a set of 1964 drawings. The actual use or existence of these degreasers has not been confirmed. Located in MMRP cleanup area on the East Campus Property.
Building 14 Firing Range (+)	Area historically used to test manufactured guns. Range consists of a long narrow northern extension from former Building 14, sand backstop, hopper, and elevator. Located in the MMRP Cleanup Area on the East Campus Property.
LR-64 Rocket Engine Testing Program (+)	A rocket engine was tested in former Building 31 with various components stored in bunkers to the northwest of former Building 31. The components of the liquid fuel and any reaction products in residual concentrations in the soil or groundwater are not considered environmental concerns. Located in the MMRP Cleanup Area on the East Campus Property.
Building 3 Construction Area	Sampling completed for characterizing soils and rock excavated during the Keystone Project.
Southeast Test Track	Soils with a greenish color were excavated. The color was determined to be natural.
Building 3 Area	Stained and odiferous soils were excavated during parking lot construction. The cause was determined to be residual materials from rock blasting, which used fuel oil and fertilizer as an explosive.

Notes:
(*) Closure report prepared.
(+) SWMUs located within the MMRP Cleanup Area will be addressed through the submission of a separate final report/corrective action completion for soils in the MMRP Cleanup Area.

Green rows represent AOCs identified during fYNOP investigations.

TABLE 2.1-1
List of Contacts
Former York Naval Ordnance Plant - York, PA

Name	Role on Project	Company	Address	Phone Number	Email Address
Timothy Scripko	Remediator - Facility Project Coordinator	Harley-Davidson Motor Company Operations, Inc.	1425 Eden Road, York, PA 17402	717-852-6096	Timothy.Scripko@harley-davidson.com
Beth Mrozinsky	Remediator - Corporate Environmental, Health, Safety and Security Director	Harley-Davidson Motor Company Operations, Inc.	3700 West Juneau Avenue, Milwaukee, WI 53208	414-573-0357	Beth.Mrozinsky@harley-davidson.com
Jesse Scott	Remediator - Corporate Environmental Health and Safety Manager	Harley-Davidson Motor Company Operations, Inc.	3700 West Juneau Avenue, Milwaukee, WI 53208	816-214-1375	Jesse.Scott@harley-davidson.com
Hamid Rafiee	Remediator - Project Representative	U. S. Army Corps of Engineers - Baltimore District	2 Hopkins Plaza, Baltimore, MD 21201	410-962-7546	Hamid.Rafiee@usace.army.mil
Ralph Golia	Consultant - fYNOP Team Member	AMO Environmental Decisions, Inc.	875 N. Easton Road, Suite 10, Doylestown, PA 18902	267-249-0417	rgolia@amoed.com
Scott Gould	Attorney - fYNOP Team Member	McNees Wallace & Nurick, LLC	100 Pine Street, P.O. Box 1166, Harrisburg, PA 17108-1166	717-237-5304	SGould@mcneeslaw.com
Chris O'Neil	Consultant - fYNOP Team Member	Groundwater Sciences Corporation	2550 Interstate Drive, Suite 303, Harrisburg, PA 17110-9606	717-901-8176	coneil@groundwatersciences.com
Rodney Myers	Consultant - fYNOP Team Member	Hydro-Terra Group	7420 Derry Street, Harrisburg, PA 17111	717-980-5150	rmyers@hydro-terra.com
Michael O'Neill	Consultant - fYNOP Team Member	EA Engineering, Science, and Technology, Inc., PBC	225 Schilling Circle, Suite 400, Hunt Valley, MD 21031	410-329-5142	moneill@eaest.com

TABLE 3.1-1
Summary of Remedy Goals and Metrics from Site-Wide Cleanup Plan
Former York Naval Ordnance Plant – York, PA

Remedy Component [1]	Type	Location	Goal	Activity	Metric
Caps	Engineering Control	LUAs 1, 2, and 3	Prevent direct contact exposure to soil, soil fill, and/or waste (LUAs 1, 2, and 3) and limit infiltration (LUA 3).	Inspect caps and request documentation of cap integrity inside West Campus warehouse from property owner. Maintain compliance documentation.	Confirm caps are in place and are not breached.
Warehouse Vapor Barrier	Engineering Control	LUA 3	Prevent potential intrusion of vapor containing COC above regulatory limits into the warehouse.	Request documentation from property owner that confirms concrete slab covering vapor barrier is intact and not breached. Maintain compliance documentation.	Receipt of documentation from property owner that confirms concrete slab in warehouse is intact and not breached.
West Parking Lot (WPL) Groundwater Extraction System	Engineering Control	LUA 3 and 7	Limit the potential for exceedances of ambient water quality criteria in Codorus Creek from groundwater discharging to the creek.	Monitor and maintain compliance documentation.	Demonstrate surface water quality criteria are met.
Southern Property Boundary Area (SPBA) Groundwater Extraction System	Engineering Control	LUA 2	Capture and control shallow groundwater containing TCE and PCE along fYNOP property boundary to maintain concentrations below USEPA Vapor Intrusion Screening Levels (VISLs).	Monitor and Maintain compliance documentation.	Demonstrate groundwater gradient is maintained from off-Site wells located along Canterbury Lane towards on-Site wells located in SPBA.
fYNOP Groundwater Treatment System	Engineering Control	LUA 1	Remove sufficient mass of dissolved-phase VOCs in groundwater from the WPL and SPBA extraction systems to meet NPDES permit requirements at Outfall 003.	Monitor and Maintain compliance documentation.	Treated groundwater discharge is compliant with NPDES permit No. 0085677 at Outfall 003 to Codorus Creek.

TABLE 3.1-1
Summary of Remedy Goals and Metrics from Site-Wide Cleanup Plan
Former York Naval Ordnance Plant – York, PA

Remedy Component [1]	Type	Location	Goal	Activity	Metric
Land Use Restrictions	Institutional Control	LUAs 1, 2, 3, and one property in LUA5	Restrict future residential land use.	Record environmental covenants and maintain compliance documentation	Confirm compliance with environmental covenant.
Groundwater Use Restrictions	Institutional Control	LUAs 1, 2, 3, and one property in LUA5	Prohibit groundwater use, except for environmental sampling and remediation purposes.	Record environmental covenants and maintain compliance documentation.	Confirm compliance with environmental covenant.
Evaluation and Mitigation for Potential Vapor Intrusion into Future Inhabited Spaces	Institutional Control	LUAs 1, 2, and 3	Prevent potential VI into future occupied buildings.	Record environmental covenants and mitigate or evaluate potential VI pathway for all new inhabitable structures.	Confirm compliance with environmental covenant.
Intrusive Activity Limitations and Controls	Institutional Control	LUAs 1, 2, and 3	Prevent exposure to contaminated soil, shallow groundwater and soil vapor during intrusive activities.	Record environmental covenant and conduct work in accordance with soil management plan (SMP).	Confirm compliance with environmental covenant.
Waste Management Limitations	Institutional Control	LUAs 1, 2, and 3	Manage waste generated during earthwork activities in accordance with applicable laws and requirements.	Record environmental covenants, control waste following activity and use limitations, and maintain waste management compliance documentation.	Confirm compliance with environmental covenant.

TABLE 3.1-1
Summary of Remedy Goals and Metrics from Site-Wide Cleanup Plan
Former York Naval Ordnance Plant – York, PA

Remedy Component [1]	Type	Location	Goal	Activity	Metric
Periodic Notification Regarding Potential Exposure to Workers	Other Remedial Obligation	One property in LUA 5 and all properties in LUA 6	Notify property owners of potential exposure to shallow groundwater by utility construction workers.	Maintain documentation of periodic notification letters.	Confirm receipt of notification letters.
Periodic Assessment of Continued Nonresidential Land Use	Other Remedial Obligation	LUA 6	Prevent future residential land use.	Conduct Periodic Assessments to document continued non-residential use and maintain compliance documentation.	Confirm non-residential land use.
Periodic Assessment of Continued Nonuse of Groundwater	Other Remedial Obligation	LUAs 4, 5, and 6	Prevent future groundwater use, except for environmental sampling and remediation purposes.	Conduct Periodic Assessments to document continued nonuse of groundwater and maintain compliance documentation.	Confirm nonuse of groundwater.
Monitored Natural Attenuation (MNA)	Other Remedial Actions	LUAs 1 through 6	Meet groundwater medium specific concentrations (MSCs) in the aquifer through MNA at designated wells at the Site.	Monitor per plan. Evaluate data to determine scope and frequency of future monitoring.	Demonstrate groundwater constituent of concern (COC) concentration trends are declining when above the MSC or remain below the MSC, once achieved

1 – Additional components of the site remedy include waivers and technical impracticability areas.

TABLE 4.0-1
Remediation Standards Attained for Substances in Soil
Former York Naval Ordnance Plant - York, PA

Substance	Chemical Abstract Service (CAS) Number	East Campus Property		West Campus Property	
		Statewide Health Standard (SHS)	Site-Specific Standard (SSS)	Statewide Health Standard (SHS)	Site-Specific Standard (SSS)
1,1,1,2-Tetrachloroethane	630-20-6	✓		✓	
1,1,1-Trichloroethane	71-55-6		✓		✓
1,1,2,2-Tetrachloroethane	79-34-5	✓		✓	
1,1,2-Trichloroethane	79-00-5	✓			✓
1,1-Dichloroethane	75-34-3	✓		✓	
1,1-Dichloroethene	75-35-4	✓		✓	
1,2,4-Trichlorobenzene	120-82-1	✓		✓	
1,2,4-Trimethylbenzene	95-63-6		✓		✓
1,2-Dibromo-3-Chloropropane	96-12-8	✓		✓	
1,2-Dibromoethane	106-93-4	✓		✓	
1,2-Dichlorobenzene	95-50-1	✓		✓	
1,2-Dichloroethane	107-06-2		✓	✓	
1,2-Dichloroethene	540-59-0	✓		✓	
1,2-Dichloropropane	78-87-5	✓		✓	
1,3,5-Trimethylbenzene	108-67-8		✓		✓
1,3-Dichlorobenzene	541-73-1	✓		✓	
1,3-Dichloropropene	542-75-6	✓		✓	
1,4-Dichlorobenzene	106-46-7	✓		✓	
1,4-Dioxane	123-91-1	✓		✓	
2,4,5-Trichlorophenol	95-95-4	✓		✓	
2,4,6-Trichlorophenol	88-06-2	✓		✓	
2,4-Dichlorophenol	120-83-2	✓		✓	
2,4-Dimethylphenol	105-67-9	✓		✓	
2,4-Dinitrophenol	51-28-5	✓		✓	
2,4-Dinitrotoluene	121-14-2	✓		✓	
2,6-Dinitrotoluene	606-20-2	✓			✓
2-Butanone	78-93-3	✓		✓	
2-Chloroethyl Vinyl Ether	110-75-8	✓		✓	
2-Chloronaphthalene	91-58-7	✓		✓	
2-Chlorophenol	95-57-8	✓		✓	
2-Hexanone	591-78-6	✓		✓	
2-Methylnaphthalene	91-57-6	✓		✓	
2-Methylphenol	95-48-7	✓		✓	
2-Nitroaniline	88-74-4	✓		✓	
2-Nitrophenol	88-75-5	✓		✓	
3,3'-Dichlorobenzidine	91-94-1	✓		✓	
3/4-Methylphenol	106-44-5		✓	✓	
3-Nitroaniline	99-09-2	✓		✓	
4,4'-DDD	72-54-8	✓		✓	
4,4'-DDE	72-55-9	✓		✓	
4,4'-DDT	50-29-3	✓		✓	

TABLE 4.0-1
Remediation Standards Attained for Substances in Soil
Former York Naval Ordnance Plant - York, PA

Substance	Chemical Abstract Service (CAS) Number	East Campus Property		West Campus Property	
		Statewide Health Standard (SHS)	Site-Specific Standard (SSS)	Statewide Health Standard (SHS)	Site-Specific Standard (SSS)
4,6-Dinitro-2-Methylphenol	534-52-1	✓		✓	
4-Bromophenyl phenyl ether	101-55-3	✓		✓	
4-Chloro-3-Methyl-Phenol	59-50-7	✓		✓	
4-Chloroaniline	106-47-8	✓		✓	
4-Chlorodiphenyl Ether	7005-72-3	✓		✓	
4-Methyl-2-Pentanone	108-10-1	✓		✓	
4-Methylphenol	106-44-5	✓		✓	
4-Nitroaniline	100-01-6	✓		✓	
4-Nitrophenol	100-02-7	✓		✓	
Acenaphthene	83-32-9	✓		✓	
Acenaphthylene	208-96-8	✓		✓	
Acetone	67-64-1	✓		✓	
Acrolein	107-02-8	✓		✓	
Acrylonitrile	107-13-1	✓		✓	
Aldrin	309-00-2	✓		✓	
Alpha-BHC	319-84-6	✓		✓	
Alpha-Endosulfan	959-98-8	✓		✓	
Aluminum	7429-90-5	✓		✓	
Anthracene	120-12-7	✓		✓	
Antimony	7440-36-0		✓		✓
Aroclor-1016	12674-11-2	✓		✓	
Aroclor-1221	11104-28-2	✓		✓	
Aroclor-1232	11141-16-5	✓		✓	
Aroclor-1242	53469-21-9	✓		✓	
Aroclor-1248	12672-29-6	✓		✓	
Aroclor-1254	11097-69-1	✓			✓
Aroclor-1260	11096-82-5	✓		✓	
Aroclor-1268	11100-14-4	✓		✓	
Arsenic	7440-38-2		✓		✓
Barium	7440-39-3	✓		✓	
Benzene	71-43-2	✓		✓	
Benzo(a)anthracene	56-55-3	✓		✓	
Benzo(a)pyrene	50-32-8	✓			✓
Benzo(b)fluoranthene	205-99-2	✓		✓	
Benzo(g,h,i)perylene	191-24-2	✓		✓	
Benzo(k)fluoranthene	207-08-9	✓		✓	
Beryllium	7440-41-7	✓		✓	
Beta-BHC	319-85-7	✓		✓	
Beta-Endosulfan	33213-65-9	✓		✓	
Bis(2-Chloroethoxy) Methane	111-91-1	✓		✓	
Bis(2-Chloroethyl) Ether	111-44-4	✓		✓	

TABLE 4.0-1
Remediation Standards Attained for Substances in Soil
Former York Naval Ordnance Plant - York, PA

Substance	Chemical Abstract Service (CAS) Number	East Campus Property		West Campus Property	
		Statewide Health Standard (SHS)	Site-Specific Standard (SSS)	Statewide Health Standard (SHS)	Site-Specific Standard (SSS)
Bis(2-Chloroisopropyl) Ether	108-60-1	✓		✓	
Bis(2-ethylhexyl) phthalate	117-81-7	✓		✓	
Bromochloromethane	74-97-5	✓		✓	
Bromodichloromethane	75-27-4	✓		✓	
Bromoform	75-25-2	✓		✓	
Bromomethane	74-83-9	✓		✓	
Butylbenzylphthalate	85-68-7	✓		✓	
Cadmium	7440-43-9	✓			✓
Calcium	7440-70-2	✓		✓	
Carbazole	86-74-8	✓		✓	
Carbon Disulfide	75-15-0	✓		✓	
Carbon Tetrachloride	56-23-5	✓		✓	
Chlordane	57-74-9	✓		✓	
Chlorobenzene	108-90-7	✓		✓	
Chlorodibromomethane	124-48-1	✓		✓	
Chloroethane	75-00-3	✓		✓	
Chloroform	67-66-3	✓		✓	
Chloromethane	74-87-3	✓		✓	
Chromium	18540-29-9		✓		✓
Chrysene	218-01-9	✓		✓	
cis-1,2-Dichloroethene	156-59-2		✓		✓
cis-1,3-Dichloropropene	10061-01-5	✓		✓	
Cobalt	7440-48-4	✓		✓	
Copper	7440-50-8	✓		✓	
Cyanide, Free	57-12-5	✓		✓	
Cyanide, Total	57-12-5	✓		✓	
Delta-BHC	319-86-8	✓		✓	
Dibenzo(a,h)anthracene	53-70-3	✓		✓	
Dibenzofuran	132-64-9	✓		✓	
Dieldrin	60-57-1	✓		✓	
Diethylphthalate	84-66-2	✓		✓	
Dimethylphthalate	131-11-3	✓			✓
Di-n-Butylphthalate	84-74-2	✓		✓	
Di-n-octylphthalate	117-84-0	✓		✓	
Endosulfan Sulfate	1031-07-8	✓		✓	
Endrin	72-20-8	✓		✓	
Endrin Aldehyde	7421-93-4	✓		✓	
Ethylbenzene	100-41-4	✓		✓	
Fluoranthene	206-44-0	✓		✓	
Fluorene	86-73-7	✓		✓	
Heptachlor	76-44-8	✓		✓	

TABLE 4.0-1
Remediation Standards Attained for Substances in Soil
Former York Naval Ordnance Plant - York, PA

Substance	Chemical Abstract Service (CAS) Number	East Campus Property		West Campus Property	
		Statewide Health Standard (SHS)	Site-Specific Standard (SSS)	Statewide Health Standard (SHS)	Site-Specific Standard (SSS)
Heptachlor Epoxide	1024-57-3	✓		✓	
Hexachlorobenzene	118-74-1	✓			✓
Hexachlorobutadiene	87-68-3	✓		✓	
Hexachlorocyclopentadiene	77-47-4	✓		✓	
Hexachloroethane	67-72-1	✓		✓	
Hexavalent Chromium	18540-29-9		✓	✓	
Indeno(1,2,3-cd)pyrene	193-39-5	✓		✓	
Iron	7439-89-6	✓		✓	
Isophorone	78-59-1	✓		✓	
Isopropylbenzene	98-82-8	✓		✓	
Lead	7439-92-1		✓		✓
Lindane (Gamma-BHC)	58-89-9	✓		✓	
m,p-Xylene	1330-20-7	✓		✓	
Magnesium	7439-95-4	✓		✓	
Manganese	7439-96-5	✓		✓	
Mercury	7439-97-6	✓		✓	
Methyl tert-butyl ether	1634-04-4	✓		✓	
Methylene chloride	75-09-2		✓	✓	
Naphthalene	91-20-3	✓		✓	
Nickel	7440-02-0	✓			✓
Nitrobenzene	98-95-3		✓		✓
N-Nitrosodi-n-propylamine	621-64-7	✓			✓
N-Nitrosodiphenylamine	86-30-6	✓		✓	
o-Xylene	95-47-6	✓		✓	
Pentachlorophenol	87-86-5	✓		✓	
Phenanthrene	85-01-8	✓		✓	
Phenol	108-95-2	✓		✓	
Potassium	7440-09-7	✓		✓	
Pyrene	129-00-0	✓		✓	
Selenium	7782-49-2	✓			✓
Silver	7440-22-4	✓			✓
Sodium	7440-23-5	✓		✓	
Styrene	100-42-5	✓		✓	
Tetrachloroethene	127-18-4		✓		✓
Thallium	7440-28-0		✓		✓
Toluene	108-88-3	✓			✓
Toxaphene	8001-35-2	✓		✓	
trans-1,2-Dichloroethene	156-60-5	✓		✓	
trans-1,3-Dichloropropene	10061-02-6	✓		✓	
Trichloroethene	79-01-6		✓		✓
Trichlorofluoromethane	75-69-4	✓		✓	

TABLE 4.0-1
Remediation Standards Attained for Substances in Soil
Former York Naval Ordnance Plant - York, PA

Substance	Chemical Abstract Service (CAS) Number	East Campus Property		West Campus Property	
		Statewide Health Standard (SHS)	Site-Specific Standard (SSS)	Statewide Health Standard (SHS)	Site-Specific Standard (SSS)
Vinyl Acetate	108-05-4	✓		✓	
Vinyl Chloride	75-01-4		✓		✓
Xylenes (Total)	1330-20-7	✓		✓	
Zinc	7440-66-6	✓			✓

TABLE 4.0-2
Remediation Standards Attained for Substances in Groundwater
Former York Naval Ordnance Plant - York, PA

Substance	Chemical Abstract Service (CAS) Number	Site-Specific Standard (SSS)
1,1,1,2-Tetrachloroethane	630-20-6	✓
1,1,1-Trichloroethane	71-55-6	✓
1,1,2,2-Tetrachloroethane	79-34-5	✓
1,1,2-Trichloroethane	79-00-5	✓
1,1-Dichloroethane	75-34-3	✓
1,1-Dichloroethene	75-35-4	✓
1,2,4-Trichlorobenzene	120-82-1	✓
1,2,4-Trimethylbenzene	95-63-6	✓
1,2-Dibromoethane	106-93-4	✓
1,2-Dichlorobenzene	95-50-1	✓
1,2-Dichloroethane	107-06-2	✓
1,2-Dichloropropane	78-87-5	✓
1,3,5-Trimethylbenzene	108-67-8	✓
1,3-Dichlorobenzene	541-73-1	✓
1,4-Dichlorobenzene	106-46-7	✓
1,4-Dioxane	123-91-1	✓
2,4,5-Trichlorophenol	95-95-4	✓
2,4,6-Trichlorophenol	88-06-2	✓
2,4-Dichlorophenol	120-83-2	✓
2,4-Dimethylphenol	105-67-9	✓
2,4-Dinitrophenol	51-28-5	✓
2,6-Dinitrotoluene	606-20-2	✓
2-Butanone	78-93-3	✓
2-Chloronaphthalene	91-58-7	✓
2-Chlorophenol	95-57-8	✓
2-Hexanone	591-78-6	✓
2-Methylnaphthalene	91-57-6	✓
2-Methylphenol	95-48-7	✓
2-Nitroaniline	88-74-4	✓
2-Nitrophenol	88-75-5	✓
3,3'-Dichlorobenzidine	91-94-1	✓
3/4-Methylphenol	106-44-5	✓
3-Nitroaniline	99-09-2	✓
4,6-Dinitro-2-Methylphenol	534-52-1	✓
4-Bromophenyl phenyl ether	101-55-3	✓
4-Chloro-3-Methyl-Phenol	59-50-7	✓
4-Chloroaniline	106-47-8	✓
4-Chlorodiphenyl Ether	7005-72-3	✓
4-Methyl-2-Pentanone	108-10-1	✓
4-Nitroaniline	100-01-6	✓
4-Nitrophenol	100-02-7	✓
Acenaphthene	83-32-9	✓

TABLE 4.0-2
Remediation Standards Attained for Substances in Groundwater
Former York Naval Ordnance Plant - York, PA

Substance	Chemical Abstract Service (CAS) Number	Site-Specific Standard (SSS)
Acenaphthylene	208-96-8	✓
Acetone	67-64-1	✓
Acrylonitrile	107-13-1	✓
Anthracene	120-12-7	✓
Antimony	7440-36-0	✓
Arsenic	7440-38-2	✓
Barium	7440-39-3	✓
Benzene	71-43-2	✓
Benzo(a)anthracene	56-55-3	✓
Benzo(a)pyrene	50-32-8	✓
Benzo(b)fluoranthene	205-99-2	✓
Benzo(g,h,i)perylene	191-24-2	✓
Benzo(k)fluoranthene	207-08-9	✓
Beryllium	7440-41-7	✓
Bis(2-Chloroethoxy) Methane	111-91-1	✓
Bis(2-Chloroethyl) Ether	111-44-4	✓
Bis(2-Chloroisopropyl) Ether	108-60-1	✓
Bis(2-ethylhexyl) phthalate	117-81-7	✓
Bromochloromethane	74-97-5	✓
Bromodichloromethane	75-27-4	✓
Bromoform	75-25-2	✓
Bromomethane	74-83-9	✓
Butylbenzylphthalate	85-68-7	✓
Cadmium	7440-43-9	✓
Carbazole	86-74-8	✓
Carbon Disulfide	75-15-0	✓
Carbon Tetrachloride	56-23-5	✓
Chlorobenzene	108-90-7	✓
Chlorodibromomethane	124-48-1	✓
Chloroethane	75-00-3	✓
Chloroform	67-66-3	✓
Chloromethane	74-87-3	✓
Chromium	18540-29-9	✓
Chrysene	218-01-9	✓
cis-1,2-Dichloroethene	156-59-2	✓
cis-1,3-Dichloropropene	10061-01-5	✓
Copper	7440-50-8	✓
Cyanide, Free	57-12-5	✓
Cyanide, Total	57-12-5	✓
Dibenzo(a,h)anthracene	53-70-3	✓
Dibenzofuran	132-64-9	✓
Diethylphthalate	84-66-2	✓

TABLE 4.0-2
Remediation Standards Attained for Substances in Groundwater
Former York Naval Ordnance Plant - York, PA

Substance	Chemical Abstract Service (CAS) Number	Site-Specific Standard (SSS)
Dimethylphthalate	131-11-3	✓
Di-n-Butylphthalate	84-74-2	✓
Di-n-octylphthalate	117-84-0	✓
Ethylbenzene	100-41-4	✓
Fluoranthene	206-44-0	✓
Fluorene	86-73-7	✓
Hexachlorobenzene	118-74-1	✓
Hexachlorobutadiene	87-68-3	✓
Hexachlorocyclopentadiene	77-47-4	✓
Hexachloroethane	67-72-1	✓
Hexavalent Chromium	18540-29-9	✓
Indeno(1,2,3-cd)pyrene	193-39-5	✓
Iron	7439-89-6	✓
Isophorone	78-59-1	✓
Isopropylbenzene	98-82-8	✓
Lead	7439-92-1	✓
Manganese	7439-96-5	✓
Mercury	7439-97-6	✓
Methyl tert-butyl ether	1634-04-4	✓
Methylene chloride	75-09-2	✓
Naphthalene	91-20-3	✓
Nickel	7440-02-0	✓
Nitrobenzene	98-95-3	✓
N-Nitrosodi-n-propylamine	621-64-7	✓
N-Nitrosodiphenylamine	86-30-6	✓
Pentachlorophenol	87-86-5	✓
Phenanthrene	85-01-8	✓
Phenol	108-95-2	✓
Pyrene	129-00-0	✓
Selenium	7782-49-2	✓
Silver	7440-22-4	✓
Styrene	100-42-5	✓
Tetrachloroethene	127-18-4	✓
Thallium	7440-28-0	✓
Toluene	108-88-3	✓
trans-1,2-Dichloroethene	156-60-5	✓
trans-1,3-Dichloropropene	10061-02-6	✓
Trichloroethene	79-01-6	✓
Vanadium	7440-62-2	✓
Vinyl Chloride	75-01-4	✓
Xylenes (Total)	1330-20-7	✓
Zinc	7440-66-6	✓

TABLE 4.1-1
Substances in Soils Risk Assessment Affected by Medium-Specific Concentration and Regional Screening Level Changes
Former York Naval Ordnance Plan - York, PA

Data Set 1 - Surface soil from zero to two feet below ground surface (bgs) in the East Campus Data Set

No Substances Affected

Data Set 2 - Surface and subsurface soil From zero to 15 feet bgs in the in the East Campus Data Set

No Substances Affected

Data Set 3 - Surface soil from zero to two feet bgs in the West Campus Data Set

Substance	PADEP SHS MSC (mg/kg)		Maximum Detected Concentration (mg/kg)	Sample Location	Sample Depth (feet bgs)	Date Sample Collected	Is Maximum Concentration > Nov 2021 MSC Screening Value?	USEPA RSL for Industrial Soil (mg/kg)		Is Maximum Concentration > May 2022 RSL Screening Value?
	Soils RA (Jan 2011)	Nov 2021						Soils RA (Nov 2011)	May 2022	
2,6-Dinitrotoluene	10	0.18	1.53	BPA TP-1a	1 - 1.5	12/7/1999	Yes	620	1.5	Yes
Nitrobenzene	20	0.63	0.88	HD-WPL-SB-106-01-0	0 -1	4/23/2007	Yes	22	22	No

Data Set 4 - Surface and subsurface soil From zero to 15 feet bgs in the West Campus Data Set

Substance	PADEP SHS MSC (mg/kg)		Maximum Detected Concentration (mg/kg)	Sample Location	Sample Depth (feet bgs)	Date Sample Collected	Is Maximum Concentration > Nov 2021 MSC Screening Value?	USEPA RSL for Industrial Soil (mg/kg)		Is Maximum Concentration > May 2022 RSL Screening Value?
	Soils RA (Jan 2011)	Nov 2021						Soils RA (Nov 2011)	May 2022	
2,6-Dinitrotoluene	10	0.18	1.53	BPA TP-1a	1 - 1.5	12/7/1999	Yes	620	1.5	Yes
Nitrobenzene	20	0.63	0.88	HD-WPL-SB-106-01-0	0 -1	4/23/2007	Yes	22	22	No

Notes:
PADEP - Pennsylvania Department of Environmental Protection
SHS - Statewide health standard
MSC - Medium-specific concentration
mg/kg - Milligrams per kilogram
USEPA - United States Environmental Protection Agency
RSL - Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ = 0.1)
RA - Risk Assessment
bgs - Below ground surface

TABLE 4.1-2
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 2 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 feet (mg/kg)	RSL Industrial Soil (mg/kg)	NPA-CS-001 1 - 2 8/4/10	NPA-CS-008 1.5 - 2 8/4/10	NPA-CS-010 1.5 - 2 8/4/10	NPA-CS-012 1.5 - 2 8/4/10	NPA-SB-017 1.5 - 2.5 7/16/10	NPA-SB-018 1.5 - 2.5 7/16/10	B51H-CS-001 1 - 1.5 8/24/11	B51H-CS-002 1 - 1.5 8/24/11	B51H-CS-003 1 - 1.5 8/24/11	B51H-CS-004 1 - 1.5 8/24/11	B51H-CS-005 1 - 1.5 8/24/11	B51H-CS-006 1 - 1.5 8/24/11	B51H-CS-007 1 - 1.5 8/24/11	B51H-CS-008 1 - 1.5 8/24/11	B51H-CS-009 1 - 1.5 8/24/11
Cyanide, Free																		
Cyanide, Free	200	1900	15							0.048 U	0.045 U	0.046 U	0.046 U	0.046 U	0.043 U	0.045 U	0.045 U	0.044 U
Cyanide, Total																		
Cyanide, Total	200	1900	15	1.2	0.6 U	0.56 U	0.61 U			0.6 U	0.56 U	0.57 U	0.57 U	0.58 U	0.54 U	0.56 U	0.57 U	0.56 U
METAL																		
Antimony	27	1300	47	0.38 B	1.2 U	1.1 U	1.2 U	0.23 B	0.16 B	0.16 J	0.1 J	0.044 J	0.076 J	0.082 J	0.023 J	0.044 J	0.036 J	0.1 J
Arsenic	29	61	3	6.1	1.5	5	3.5	6.1	8.8	1.5	3	6.7	3.9	2.1	1.6	1.4	1.5	3.9
Barium	8200	190000	22000					21.8	44.5	140 B	58 B	70 B	89 B	89 B	68 B	88 B	97 B	87 B
Beryllium	320	6400	230	0.25 B	0.55	0.56	0.73	0.23	0.49	0.54	0.41	0.71	0.59	0.48	0.4	0.39	0.52	0.38
Cadmium	38	1600	10	0.83	0.6 U	0.56 U	0.61 U	0.61	0.25	0.074 J	0.052 J	0.065 J	0.11	0.095 J	0.051 J	0.061 J	0.053 J	0.08 J
Chromium	190	180	6.3	61.3	10.9	10.2	10.2	12.8 J	10.4 J	13 B	12 B	12 B	12 B	12 B	14 B	9.9 B	33 B	130 B
Copper	43000	100000	4700	65.5	5.6	6.8	4.9	66.1	45.2	7.7 J	7.7 J	3.9 J	8 J	8 J	3.3 J	5 J	3.9 J	8.5 J
Hexavalent Chromium	190	180	6.3	3.1	0.25 B	0.51	0.5			0.38 J	1.2	0.25 J	0.6	0.55	0.43 U	0.48	6.2	7.7
Lead	450	1000	800	40.7	10.4	10.4	10.8	32.1	26.6	9.4	8.3	12	17	12	6.5	10	12	9.4
Mercury	10	510	4.6	0.15	0.02 B	0.04	0.033 B	0.077	0.015 B	0.039 U	0.059	0.015 J	0.019 J	0.015 J	0.035 U	0.02 J	0.018 J	0.025 J
Nickel	650	64000	2200	44.5 E	2.9 B	3 B	2.8 B	23.9	10.6	9.1	4.1	4.9	8.9	13	8.6	13	9.8	18
Selenium	26	16000	580	0.39 B	0.6 U	0.56 U	0.61 U	0.43 B J	0.42 B J	0.7	0.52 U	0.77	0.49 U	0.55 U	0.49 U	0.52 U	0.50 U	0.51 U
Silver	84	16000	580	0.12 B	0.6 U	0.56 U	0.61 U	0.036 B	0.053 B	0.11 U	0.1 U	0.11 U	0.097 U	0.11 U	0.097 U	0.1 U	0.1 U	0.1 U
Thallium	14	32	1.2	1.2 U	1.2 U	0.3 B	1.2 U	0.29	0.41	0.18	0.11	0.11	0.13	0.16	0.08 J	0.11	0.094 J	0.11
Vanadium	680	220	580					14.2 J	21.3 J	15	16	14	15	18	6.7	12	7.5	15
Zinc	12000	190000	35000	106	7.9	8.2	7.9	29.9	18.2	19 J	13 J	15 J	25 J	21 J	12 J	17 J	11 J	18 J
Polychlorinated Biphenols																		
Aroclor-1016	190	220	5.1	0.4 U	0.02 U	0.019 U	0.02 U	0.097 U	0.042 U									
Aroclor-1221	0.68	23	0.83	0.4 U	0.02 U	0.019 U	0.02 U	0.097 U	0.042 U									
Aroclor-1232	0.54	46	0.72	0.4 U	0.02 U	0.019 U	0.02 U	0.097 U	0.042 U									
Aroclor-1242	17	46	0.95	0.4 U	0.02 U	0.019 U	0.02 U	0.097 U	0.042 U									
Aroclor-1248	67	46	0.94	0.4 U	0.02 U	0.019 U	0.02 U	0.097 U	0.042 U									
Aroclor-1254	380	64	0.97	1.9	0.067	0.019 U	0.02 U	0.097 U	0.042 U									
Aroclor-1260	630	46	0.99	1.6	0.078	0.019 U	0.6	4.9	2.1									
Semi Volatile Organic Compound																		
1,2,4-Trichlorobenzene	27	160	26	3.9 U	0.39 U	0.37 U	0.027 J	19 U	0.81 U									
1,2-Dichlorobenzene	60	10000	930	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
1,3,5-Trinitrobenzene			3200															
1,3-Dichlorobenzene	61	10000		3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
1,3-Dinitrobenzene	0.1	320	8.2															
1,4-Dichlorobenzene	10	200	11	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
1-Methylnaphthalene			73															
2,4,5-Trichlorophenol	5900	190000	8200	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
2,4,6-Trichlorophenol	28	3200	82	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
2,4,6-Trinitrotoluene	0.2	1600	51															
2,4-Dichlorophenol	2	9600	250	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
2,4-Dimethylphenol	190	10000	1600	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
2,4-Dinitrophenol	19	6400	160	20 U	2 U	1.9 U	2.1 U	100 U	4.2 U									
2,4-Dinitrotoluene	0.88	290	7.4	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
2,6-Dinitrotoluene	0.18	61	1.5	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
2-Amino-4,6-Dinitrotoluene			11															
2-Chloronaphthalene	17000	190000	6000	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
2-Chlorophenol	4.4	10000	580	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
2-Methylnaphthalene	100	240	300	3.9 U	0.39 U	0.37 U	0.065 J	0.84 J	0.085 J									
2-Methylphenol	490	160000	4100	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
2-Nitroaniline	0.044	3.9	800	20 U	2 U	1.9 U	2.1 U	100 U	4.2 U									
2-Nitrophenol	78	26000		3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
2-Nitrotoluene			15															
3-& 4-Methylphenol [1]	49	16000	1600	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
3,3'-Dichlorobenzidine	33	200	5.1	19 U	1.9 U	1.8 U	2 U	94 U	3.9 U									
3-Nitroaniline				20 U	2 U	1.9 U	2.1 U	100 U	4.2 U									
3-Nitrotoluene			8.2															
4,6-Dinitro-2-Methylphenol	0.78	260	6.6	20 U	2 U	1.9 U	2.1 U	100 U	4.2 U									
4-Amino-2,6-Dinitrotoluene			11															
4-Bromophenyl phenyl ether				3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
4-Chloro-3-Methyl-Phenol	2000	190000	8200	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
4-Chloroaniline	1.8	460	11	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
4-Chlorodiphenyl Ether				3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
4-Nitroaniline	14	4600	110	20 U	2 U	1.9 U	2.1 U	100 U	4.2 U									
4-Nitrophenol	6	26000		20 U	2 U	1.9 U	2.1 U	100 U	4.2 U									
4-Nitrotoluene			140															
Acenaphthene	4700	190000	4500	3.9 U	0.035 J	0.37 U	0.47	1.3 J	0.13 J									

TABLE 4.1-2
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 2 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 feet (mg/kg)	RSL Industrial Soil (mg/kg)	NPA-CS-001 1 - 2 8/4/10	NPA-CS-008 1.5 - 2 8/4/10	NPA-CS-010 1.5 - 2 8/4/10	NPA-CS-012 1.5 - 2 8/4/10	NPA-SB-017 1.5 - 2.5 7/16/10	NPA-SB-018 1.5 - 2.5 7/16/10	B51H-CS-001 1 - 1.5 8/24/11	B51H-CS-002 1 - 1.5 8/24/11	B51H-CS-003 1 - 1.5 8/24/11	B51H-CS-004 1 - 1.5 8/24/11	B51H-CS-005 1 - 1.5 8/24/11	B51H-CS-006 1 - 1.5 8/24/11	B51H-CS-007 1 - 1.5 8/24/11	B51H-CS-008 1 - 1.5 8/24/11	B51H-CS-009 1 - 1.5 8/24/11
Acenaphthylene	6600	190000		0.48 J	0.39 U	0.37 U	0.16 J	19 U	0.81 U									
Anthracene	350	190000	23000	0.18 J	0.02 J	0.37 U	6.1	0.55 J	0.094 J									
Benzo (A) Anthracene	340	130	21	0.42 J	0.033 J	0.37 U	3	2 J	0.19 J									
Benzo (a) Pyrene	46	91	2.1	0.89 J	0.018 J	0.37 U	0.84	1.4 J	0.19 J									
Benzo (b) Fluoranthene	170	76	21	1.2 J	0.026 J	0.37 U	1.6	2.9 J	0.34 J									
Benzo (g,h,i) Perylene	180	190000		0.81 J	0.39 U	0.37 U	0.25 J	1 J	0.15 J									
Benzo (k) Fluoranthene	610	76	210	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Bis(2-Chloroethoxy) Methane	29	9600	250	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Bis(2-Chloroethyl) Ether	0.076	6.7	1	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Bis(2-Chloroisopropyl) Ether	30	220	4700	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Bis(2-Ethylhexyl) Phthalate	130	6500	160	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.21 J									
Butylbenzylphthalate	10000	10000	1200	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Carbazole	89	4600		0.15 J	0.39 U	0.37 U	0.21 J	19 U	0.81 U									
Chrysene	230	760	2100	0.82 J	0.032 J	0.37 U	2.9	1.8 J	0.2 J									
Dibenzo (a,h) Anthracene	270	22	2.1	3.9 U	0.39 U	0.37 U	0.15 J	19 U	0.81 U									
Dibenzofuran	250	3200	120	3.9 U	0.39 U	0.37 U	0.49	19 U	0.81 U									
Diethylphthalate	7800	10000	66000	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Dimethylphthalate				3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Di-n-Butylphthalate	4000	10000	8200	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Di-n-octylphthalate	10000	10000	820	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Fluoranthene	3200	130000	3000	1.2 J	0.11 J	0.37 U	14	3.2 J	0.55 J									
Fluorene	3800	130000	3000	3.9 U	0.031 J	0.37 U	1.6	0.59 J	0.12 J									
Hexachlorobenzene	0.96	57	0.96	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Hexachlorobutadiene	42	1200	5.3	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Hexachlorocyclopentadiene	91	10000	0.75	19 U	1.9 U	1.8 U	2 U	94 U	3.9 U									
Hexachloroethane	0.56	230	8	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	0.2	1100	38															
Indeno (1,2,3-cd) Pyrene	18000	76	21	0.55 J	0.39 U	0.37 U	0.28 J	19 U	0.1 J									
Isophorone	10	10000	2400	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Methyl-2,4,6-Trinitrophenylnitramine			230															
Naphthalene	25	66	8.6	0.25 J	0.39 U	0.37 U	0.027 J	1.4 J	0.079 J									
Nitrobenzene	0.63	55	22	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Nitroglycerine	0.5	320	8.2															
N-Nitrosodi-N-Propylamine	0.013	1.1	0.33	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
N-Nitrosodiphenylamine	15	860	470	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Octahydro-Tetranitro-1,3,5,7-Tetrazocine	40	160000	5700															
Pentachlorophenol	5	230	4	19 U	1.9 U	1.8 U	2 U	94 U	3.9 U									
Pentaerythritol tetranitrate			530															
Phenanthrene	10000	190000		0.2 J	0.071 J	0.37 U	15	1.2 J	0.81									
Phenol	200	16000	25000	3.9 U	0.39 U	0.37 U	0.4 U	19 U	0.81 U									
Picric acid			160															
Pyrene	2200	96000	2300	3.3 J	0.089 J	0.37 U	8.3	9.8 J	0.75 J									
Total Solids																		
Percent Solids																		
Petroleum Hydrocarbons																		
N-Hexane Extractable Material				5150	422	186 U	497											
Volatile Organic Compound																		
1,1,1,2-Tetrachloroethane	18	300	8.8	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
1,1,1-Trichloroethane	20	10000	3600	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
1,1,2,2-Tetrachloroethane	0.43	38	2.7	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 UJ	0.0047 UJ	0.0052 UJ	0.005 UJ	0.0048 UJ	0.0046 UJ	0.0053 UJ	0.0052 UJ	0.005 UJ
1,1,2-Trichloroethane	0.5	16	0.63	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
1,1-Dichloroethane	16	1400	16	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 UJ	0.0047 UJ	0.0052 UJ	0.005 UJ	0.0048 UJ	0.0046 UJ	0.0053 UJ	0.0052 UJ	0.005 UJ
1,1-Dichloroethene	0.7	10000	100	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
1,2-Dibromoethane	0.005	3.7	0.16	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
1,2-Dichloroethane	0.5	85	2	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
1,2-Dichloropropane	0.5	0.6	6.6	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
1,4-Dioxane	2.7	440	24	1.2 U	0.96 U	1 U	1.1 U	99 U	55 U	1.1 U	0.94 U	1 U	1 U	0.95 U	0.93 U	1.1 U	1 U	1 U
2-Butanone	400	10000	19000	0.023 U	0.019 U	0.02 U	0.022 U	2 U	1.1 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
2-Hexanone	26	2400	130	0.023 U	0.019 U	0.02 U	0.022 U	2 U	1.1 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
4-Methyl-2-Pentanone	780	10000	14000	0.023 U	0.019 U	0.02 U	0.022 U	2 U	1.1 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Acetone	8800	10000	110000	0.023 U	0.019 U	0.0087 J	0.015 J	2 U	1.1 U	0.022 U	0.0076 J	0.01 J	0.013 J	0.019 U	0.019 U	0.014 J	0.011 J	0.012 J
Acrylonitrile	0.37	33	1.1	0.12 U	0.096 U	0.1 U	0.11 U	9.9 U	5.5 U	0.11 U	0.094 U	0.1 U	0.1 U	0.095 U	0.093 U	0.11 U	0.1 U	0.1 U
Benzene	0.5	280	5.1	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 UJ	0.0047 UJ	0.0052 UJ	0.005 UJ	0.0048 UJ	0.0046 UJ	0.0053 UJ	0.0052 UJ	0.005 UJ
Bromochloromethane	9	3200	63	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Bromodichloromethane	8	60	1.3	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Bromoform	8	2000	86	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Bromomethane	1	400	3	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U

TABLE 4.1-2
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 2 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 feet (mg/kg)	RSL Industrial Soil (mg/kg)	NPA-CS-001 1 - 2 8/4/10	NPA-CS-008 1.5 - 2 8/4/10	NPA-CS-010 1.5 - 2 8/4/10	NPA-CS-012 1.5 - 2 8/4/10	NPA-SB-017 1.5 - 2.5 7/16/10	NPA-SB-018 1.5 - 2.5 7/16/10	B51H-CS-001 1 - 1.5 8/24/11	B51H-CS-002 1 - 1.5 8/24/11	B51H-CS-003 1 - 1.5 8/24/11	B51H-CS-004 1 - 1.5 8/24/11	B51H-CS-005 1 - 1.5 8/24/11	B51H-CS-006 1 - 1.5 8/24/11	B51H-CS-007 1 - 1.5 8/24/11	B51H-CS-008 1 - 1.5 8/24/11	B51H-CS-009 1 - 1.5 8/24/11
Carbon Disulfide	620	10000	350	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Carbon Tetrachloride	0.5	370	2.9	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Chlorobenzene	10	3900	130	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Chlorodibromomethane	8	1100	39	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Chloroethane	8800	10000	2300	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Chloroform	8	96	1.4	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Chloromethane	3	1200	46	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
cis-1,2-Dichloroethene	7	6400	230	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.33 J	0.063 J	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
cis-1,3-Dichloropropene	2.7	550	8.2	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Ethylbenzene	70	880	25	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.23 J	0.24 J	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Methyl tert-butyl ether	2	8500	210	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Methylene chloride	0.5	10000	320	0.0034 J B	0.0029 J B	0.0028 J B	0.005 J B	0.49 U	0.27 U	0.0055 UJ	0.0047 UJ	0.0052 UJ	0.005 UJ	0.0048 UJ	0.0046 UJ	0.0053 UJ	0.0052 UJ	0.005 UJ
Styrene	24	10000	3500	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Tetrachloroethene	0.5	3200	39	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Toluene	100	10000	4700	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.17 J	0.12 J	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
trans-1,2-Dichloroethene	10	10000	30	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
trans-1,3-Dichloropropene [2]	2.7	550	8.2	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Trichloroethene	0.5	160	1.9	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Vinyl Chloride	0.2	61	1.7	0.0059 U	0.0048 U	0.005 U	0.0055 U	0.49 U	0.27 U	0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U
Xylenes (Total)	1000	7900	250	0.018 U	0.014 U	0.015 U	0.017 U	0.83 J	0.81 J	0.016 U	0.014 U	0.015 U	0.015 U	0.014 U	0.014 U	0.016 U	0.015 U	0.015 U

Notes:
Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".
J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.
B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-2
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 2 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B51H-CS-010 1 - 1.5 8/24/11	B51H-CS-011 1 - 1.5 8/24/11	B51H-CS-012 1 - 1.5 8/24/11	B51H-CS-012 Dup 1 - 1.5 8/24/11	SPBA-SB-006 0 - 1 3/27/17	SPBA-SB-007 0.5 - 1 3/28/17	SPBA-SB-008 0.5 - 1 3/29/17	SPBA-SB-009 0.5 - 1 3/29/17	SPBA-SB-010 0.5 - 1 3/30/17
Cyanide, Free												
Cyanide, Free	200	1900	15	0.043 U	0.044 U	0.045 U	0.045 U					
Cyanide, Total												
Cyanide, Total	200	1900	15	0.54 U	0.56 U	0.57 U	0.56 U					
METAL												
Antimony	27	1300	47	0.1 J	0.14 J	0.12 J	0.11 J					
Arsenic	29	61	3	0.79	22	9.1	8.7					
Barium	8200	190000	22000	62 B	72 B	68 B	60 B					
Beryllium	320	6400	230	0.29	0.72	0.52	0.54					
Cadmium	38	1600	10	0.039 J	0.091 J	0.081 J	0.059 J					
Chromium	190	180	6.3	9.4 B	16 B	11 B	13 B					
Copper	43000	100000	4700	1.7 J	11 J	6.8 J	8.3 J					
Hexavalent Chromium	190	180	6.3	1.2	0.36 J	0.36 J	0.25 J					
Lead	450	1000	800	7.8	11	10	9.7					
Mercury	10	510	4.6	0.015 J	0.02 J	0.03 J	0.032 J					
Nickel	650	64000	2200	2.5	6.3	3.4	3.8					
Selenium	26	16000	580	0.50 U	0.53 U	0.52 U	0.52 U					
Silver	84	16000	580	0.1 U	0.11 U	0.1 U	0.1 U					
Thallium	14	32	1.2	0.064 J	0.11	0.098 J	0.088 J					
Vanadium	680	220	580	5.5	14	16	14					
Zinc	12000	190000	35000	7.2 J	15 J	9.8 J	9.2 J					
Polychlorinated Biphenols												
Aroclor-1016	190	220	5.1									
Aroclor-1221	0.68	23	0.83									
Aroclor-1232	0.54	46	0.72									
Aroclor-1242	17	46	0.95									
Aroclor-1248	67	46	0.94									
Aroclor-1254	380	64	0.97									
Aroclor-1260	630	46	0.99									
Semi Volatile Organic Compound												
1,2,4-Trichlorobenzene	27	160	26									
1,2-Dichlorobenzene	60	10000	930									
1,3,5-Trinitrobenzene			3200									
1,3-Dichlorobenzene	61	10000										
1,3-Dinitrobenzene	0.1	320	8.2									
1,4-Dichlorobenzene	10	200	11									
1-Methylnaphthalene			73									
2,4,5-Trichlorophenol	5900	190000	8200									
2,4,6-Trichlorophenol	28	3200	82									
2,4,6-Trinitrotoluene	0.2	1600	51									
2,4-Dichlorophenol	2	9600	250									
2,4-Dimethylphenol	190	10000	1600									
2,4-Dinitrophenol	19	6400	160									
2,4-Dinitrotoluene	0.88	290	7.4									
2,6-Dinitrotoluene	0.18	61	1.5									
2-Amino-4,6-Dinitrotoluene			11									
2-Chloronaphthalene	17000	190000	6000									
2-Chlorophenol	4.4	10000	580									
2-Methylnaphthalene	100	240	300									
2-Methylphenol	490	160000	4100									
2-Nitroaniline	0.044	3.9	800									
2-Nitrophenol	78	26000										
2-Nitrotoluene			15									
3-& 4-Methylphenol [1]	49	16000	1600									
3,3'-Dichlorobenzidine	33	200	5.1									
3-Nitroaniline												
3-Nitrotoluene			8.2									
4,6-Dinitro-2-Methylphenol	0.78	260	6.6									
4-Amino-2,6-Dinitrotoluene			11									
4-Bromophenyl phenyl ether												
4-Chloro-3-Methyl-Phenol	2000	190000	8200									
4-Chloroaniline	1.8	460	11									
4-Chlorodiphenyl Ether												
4-Nitroaniline	14	4600	110									
4-Nitrophenol	6	26000										
4-Nitrotoluene			140									
Acenaphthene	4700	190000	4500									

TABLE 4.1-2
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 2 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B51H-CS-010 1 - 1.5 8/24/11	B51H-CS-011 1 - 1.5 8/24/11	B51H-CS-012 1 - 1.5 8/24/11	B51H-CS-012 Dup 1 - 1.5 8/24/11	SPBA-SB-006 0 - 1 3/27/17	SPBA-SB-007 0.5 - 1 3/28/17	SPBA-SB-008 0.5 - 1 3/29/17	SPBA-SB-009 0.5 - 1 3/29/17	SPBA-SB-010 0.5 - 1 3/30/17
Acenaphthylene	6600	190000										
Anthracene	350	190000	23000									
Benzo (A) Anthracene	340	130	21									
Benzo (a) Pyrene	46	91	2.1									
Benzo (b) Fluoranthene	170	76	21									
Benzo (g,h,i) Perylene	180	190000										
Benzo (k) Fluoranthene	610	76	210									
Bis(2-Chloroethoxy) Methane	29	9600	250									
Bis(2-Chloroethyl) Ether	0.076	6.7	1									
Bis(2-Chloroisopropyl) Ether	30	220	4700									
Bis(2-Ethylhexyl) Phthalate	130	6500	160									
Butylbenzylphthalate	10000	10000	1200									
Carbazole	89	4600										
Chrysene	230	760	2100									
Dibenzo (a,h) Anthracene	270	22	2.1									
Dibenzofuran	250	3200	120									
Diethylphthalate	7800	10000	66000									
Dimethylphthalate												
Di-n-Butylphthalate	4000	10000	8200									
Di-n-octylphthalate	10000	10000	820									
Fluoranthene	3200	130000	3000									
Fluorene	3800	130000	3000									
Hexachlorobenzene	0.96	57	0.96									
Hexachlorobutadiene	42	1200	5.3									
Hexachlorocyclopentadiene	91	10000	0.75									
Hexachloroethane	0.56	230	8									
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	0.2	1100	38									
Indeno (1,2,3-cd) Pyrene	18000	76	21									
Isophorone	10	10000	2400									
Methyl-2,4,6-Trinitrophenylnitramine			230									
Naphthalene	25	66	8.6									
Nitrobenzene	0.63	55	22									
Nitroglycerine	0.5	320	8.2									
N-Nitrosodi-N-Propylamine	0.013	1.1	0.33									
N-Nitrosodiphenylamine	15	860	470									
Octahydro-Tetranitro-1,3,5,7-Tetrazocine	40	160000	5700									
Pentachlorophenol	5	230	4									
Pentaerythritol tetranitrate			530									
Phenanthrene	10000	190000										
Phenol	200	16000	25000									
Picric acid			160									
Pyrene	2200	96000	2300									
Total Solids												
Percent Solids												
Petroleum Hydrocarbons												
N-Hexane Extractable Material												
Volatile Organic Compound												
1,1,1,2-Tetrachloroethane	18	300	8.8	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
1,1,1-Trichloroethane	20	10000	3600	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
1,1,2,2-Tetrachloroethane	0.43	38	2.7	0.0046 UJ	0.0047 UJ	0.0047 UJ	0.0053 UJ	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
1,1,2-Trichloroethane	0.5	16	0.63	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
1,1-Dichloroethane	16	1400	16	0.0046 UJ	0.0047 UJ	0.0047 UJ	0.0053 UJ	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
1,1-Dichloroethene	0.7	10000	100	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 UJ	0.0051 U	0.0047 U	0.0051 U	0.0052 U
1,2-Dibromoethane	0.005	3.7	0.16	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
1,2-Dichloroethane	0.5	85	2	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
1,2-Dichloropropane	0.5	0.6	6.6	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
1,4-Dioxane	2.7	440	24	0.93 U	0.94 U	0.94 U	1.1 U	0 R	1 R	0.95 R	1 R	1 R
2-Butanone	400	10000	19000	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
2-Hexanone	26	2400	130	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
4-Methyl-2-Pentanone	780	10000	14000	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Acetone	8800	10000	110000	0.019 U	0.019 U	0.019 U	0.021 U	0.023 U	0.02 U	0.019 U	0.021 U	0.021 U
Acrylonitrile	0.37	33	1.1	0.093 U	0.094 U	0.094 U	0.11 U	0.058 U	0.051 U	0.047 U	0.051 U	0.052 U
Benzene	0.5	280	5.1	0.0046 UJ	0.0047 UJ	0.0047 UJ	0.0053 UJ	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Bromochloromethane	9	3200	63	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Bromodichloromethane	8	60	1.3	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Bromoform	8	2000	86	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Bromomethane	1	400	3	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 UJ	0.0047 UJ	0.0051 UJ	0.0052 UJ

TABLE 4.1-2
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 2 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B51H-CS-010 1 - 1.5 8/24/11	B51H-CS-011 1 - 1.5 8/24/11	B51H-CS-012 1 - 1.5 8/24/11	B51H-CS-012 Dup 1 - 1.5 8/24/11	SPBA-SB-006 0 - 1 3/27/17	SPBA-SB-007 0.5 - 1 3/28/17	SPBA-SB-008 0.5 - 1 3/29/17	SPBA-SB-009 0.5 - 1 3/29/17	SPBA-SB-010 0.5 - 1 3/30/17
Carbon Disulfide	620	10000	350	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 UJ	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Carbon Tetrachloride	0.5	370	2.9	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Chlorobenzene	10	3900	130	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Chlorodibromomethane	8	1100	39	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Chloroethane	8800	10000	2300	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Chloroform	8	96	1.4	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Chloromethane	3	1200	46	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 UJ	0.0051 U	0.0047 UJ	0.0051 UJ	0.0052 U
cis-1,2-Dichloroethene	7	6400	230	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
cis-1,3-Dichloropropene	2.7	550	8.2	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Ethylbenzene	70	880	25	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Methyl tert-butyl ether	2	8500	210	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Methylene chloride	0.5	10000	320	0.0046 UJ	0.0047 UJ	0.0047 UJ	0.0053 UJ	0.0023 J	0.0051 U	0.0047 U	0.0053 U	0.0052 U
Styrene	24	10000	3500	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Tetrachloroethene	0.5	3200	39	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Toluene	100	10000	4700	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
trans-1,2-Dichloroethene	10	10000	30	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 UJ	0.0051 U	0.0047 U	0.0051 U	0.0052 U
trans-1,3-Dichloropropene [2]	2.7	550	8.2	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Trichloroethene	0.5	160	1.9	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Vinyl Chloride	0.2	61	1.7	0.0046 U	0.0047 U	0.0047 U	0.0053 U	0.0058 U	0.0051 U	0.0047 U	0.0051 U	0.0052 U
Xylenes (Total)	1000	7900	250	0.014 U	0.014 U	0.014 U	0.016 U	0.012 U	0.01 U	0.0095 U	0.01 U	0.01 U

Notes:
Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".
J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.
B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	NPA-CS-001 1 - 2 8/4/10	NPA-CS-002 2.5 - 3 8/4/10	NPA-CS-003 2.5 - 3 8/4/10	NPA-CS-004 2 - 3 8/4/10	NPA-CS-005 2.5 - 3 8/4/10	NPA-CS-006 2 - 2.5 8/4/10	NPA-CS-007 3.5 - 4 8/4/10	NPA-CS-007 Dup 3.5 - 4 8/4/10	NPA-CS-008 1.5 - 2 8/4/10	NPA-CS-009 3 - 3.5 8/4/10	NPA-CS-010 1.5 - 2 8/4/10	NPA-CS-011 3.5 - 4 8/4/10	NPA-CS-012 1.5 - 2 8/4/10	NPA-EX-005 3 - 4 7/14/10	NPA-EX-006 3 - 4 7/14/10
Cyanide, Free																		
Cyanide, Free	200	190000	15															
Cyanide, Total																		
Cyanide, Total	200	190000	15	1.2	0.12 B	0.62 U	0.58 U	0.6 U	0.6 U	0.61 U	0.62 U	0.6 U	0.59 U	0.56 U	0.6 U	0.61 U		
METAL																		
Antimony	27	190000	47	0.38 B	1.2 U	1.2 U	0.22 B	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U		
Arsenic	29	190000	3	6.1	1.8	4.2	2.1	2.4	4.5	3.6	2.7	1.5	1.8	5	3.3	3.5		
Barium	8200	190000	22000															
Beryllium	320	190000	230	0.25 B	0.58	0.85	0.28 B	0.59	0.53	1.1	1.1	0.55	0.69	0.56	0.65	0.73		
Cadmium	38	190000	10	0.83	0.6 U	0.62 U	0.24 B	0.6 U	0.6 U	0.61 U	0.62 U	0.6 U	0.59 U	0.56 U	0.6 U	0.61 U		
Chromium	190	140000	6.3	61.3	8.4	16.3	13	10.3	11.7	12.6	11.4	10.9	11	10.2	10.2	10.2		
Copper	43000	190000	4700	65.5	3.3	6.5	27.4	5.5	7.1	4.4	3.8	5.6	5.7	6.8	5.6	4.9		
Hexavalent Chromium	190	140000	6.3	3.1	0.62	0.77	0.92	0.62	0.24 B	2	1.8	0.25 B	0.73	0.51	0.61	0.5		
Lead	450	190000	800	40.7	8.9	10.7	14.1	9.8	11.1	10.5	10.1	10.4	9.4	10.4	9.5	10.8		
Mercury	10	190000	4.6	0.15	0.037 B	0.035 B	0.071	0.046	0.035 B	0.068	0.051	0.02 B	0.027 B	0.04	0.029 B	0.033 B		
Nickel	650	190000	2200	44.5 E	2.2 B	4.2 B	7.3	2 B	3.6 B	3.1 B	3.3 B	2.9 B	2.5 B	3 B	2.3 B	2.8 B		
Selenium	26	190000	580	0.39 B	0.6 U	0.35 B	0.58 U	0.78	0.44 B	0.36 B	0.62 U	0.6 U	0.59 U	0.56 U	0.36 B	0.61 U		
Silver	84	190000	580	0.12 B	0.6 U	0.62 U	0.58 U	0.6 U	0.6 U	0.61 U	0.62 U	0.6 U	0.59 U	0.56 U	0.6 U	0.61 U		
Thallium	14	190000	1.2	1.2 U	1.2 U	1.2 U	1.2 U	0.49 B	0.29 B	0.37 B	0.6 B	1.2 U	1.2 U	0.3 B	0.39 B	1.2 U		
Vanadium	680	190000	580															
Zinc	12000	190000	35000	106	5.2	11.4	36.7	6.7	9.1	10.5	9.6	7.9	7.5	8.2	7.2	7.9		
Polychlorinated Biphenols																		
Aroclor-1016	190	10000	5.1	0.4 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.02 U		
Aroclor-1221	0.68	27	0.83	0.4 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.02 U		
Aroclor-1232	0.54	10000	0.72	0.4 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.02 U		
Aroclor-1242	17	10000	0.95	0.4 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.02 U		
Aroclor-1248	67	10000	0.94	0.4 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.02 U		
Aroclor-1254	380	10000	0.97	1.9	0.019 U	0.02 U	0.019 U	0.02 U	0.074	0.02 U	0.02 U	0.067	0.02 U	0.019 U	0.02 U	0.02 U		
Aroclor-1260	630	190000	0.99	1.6	0.019 U	0.02 U	0.019 U	0.02 U	0.053	0.02 U	0.02 U	0.078	0.02 U	0.019 U	0.02 U	0.6		
Percent Solids																		
Percent Solids																		
pH																		
pH																		
Sulfide, Total																		
Sulfide, Total																		
Semi Volatile Organic Compound																		
1,2,4-Trichlorobenzene	27	190	26	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.027 J		
1,2-Dichlorobenzene	60	10000	930	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
1,3,5-Trinitrobenzene			3200															
1,3-Dichlorobenzene	61	10000		3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
1,3-Dinitrobenzene	0.1	190000	8.2															
1,4-Dichlorobenzene	10	230	11	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
1-Methylnaphthalene			73															
2,4,5-Trichlorophenol	5900	190000	8200	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
2,4,6-Trichlorophenol	28	190000	82	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
2,4,6-Trinitrotoluene	0.2	190000	51															
2,4-Dichlorophenol	2	190000	250	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
2,4-Dimethylphenol	190	10000	1600	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
2,4-Dinitrophenol	19	190000	160	20 U	2 U	2.1 U	19 U	2.1 U	2 U	2.1 U	2.1 U	2 U	2 U	1.9 U	2 U	2.1 U		
2,4-Dinitrotoluene	0.88	190000	7.4	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
2,6-Dinitrotoluene	0.18	190000	1.5	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
2-Amino-4,6-Dinitrotoluene			11															
2-Chloronaphthalene	17000	190000	6000	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
2-Chlorophenol	4.4	10000	580	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
2-Methylnaphthalene	100	270	300	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.019 J	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.065 J		
2-Methylphenol	490	190000	4100	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
2-Nitroaniline	0.044	4.5	800	20 U	2 U	2.1 U	19 U	2.1 U	2 U	2.1 U	2.1 U	2 U	2 U	1.9 U	2 U	2.1 U		
2-Nitrophenol	78	190000		3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
2-Nitrotoluene			15															
3-& 4-Methylphenol [1]	49	190000	1600	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
3,3'-Dichlorobenzidine	33	190000	5.1	19 U	1.9 U	2 U	18 U	1.9 U	1.8 U	2 U	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	2 U		
3-Nitroaniline				20 U	2 U	2.1 U	19 U	2.1 U	2 U	2.1 U	2.1 U	2 U	2 U	1.9 U	2 U	2.1 U		
3-Nitrotoluene			8.2															
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6	20 U	2 U	2.1 U	19 U	2.1 U	2 U	2.1 U	2.1 U	2 U	2 U	1.9 U	2 U	2.1 U		
4-Amino-2,6-Dinitrotoluene			11															
4-Bromophenyl phenyl ether				3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
4-Chloro-3-Methyl-Phenol	2000	190000	8200	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	NPA-CS-001 1 - 2 8/4/10	NPA-CS-002 2.5 - 3 8/4/10	NPA-CS-003 2.5 - 3 8/4/10	NPA-CS-004 2 - 3 8/4/10	NPA-CS-005 2.5 - 3 8/4/10	NPA-CS-006 2 - 2.5 8/4/10	NPA-CS-007 3.5 - 4 8/4/10	NPA-CS-007 Dup 3.5 - 4 8/4/10	NPA-CS-008 1.5 - 2 8/4/10	NPA-CS-009 3 - 3.5 8/4/10	NPA-CS-010 1.5 - 2 8/4/10	NPA-CS-011 3.5 - 4 8/4/10	NPA-CS-012 1.5 - 2 8/4/10	NPA-EX-005 3 - 4 7/14/10	NPA-EX-006 3 - 4 7/14/10
4-Chloroaniline	1.8	190000	11	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
4-Chlorodiphenyl Ether				3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
4-Nitroaniline	14	190000	110	20 U	2 U	2.1 U	19 U	2.1 U	2 U	2.1 U	2.1 U	2 U	2 U	1.9 U	2 U	2.1 U		
4-Nitrophenol	6	190000		20 U	2 U	2.1 U	19 U	2.1 U	2 U	2.1 U	2.1 U	2 U	2 U	1.9 U	2 U	2.1 U		
4-Nitrotoluene			140															
Acenaphthene	4700	190000	4500	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.11 J	0.4 U	0.4 U	0.035 J	0.39 U	0.37 U	0.39 U	0.47		
Acenaphthylene	6600	190000		0.48 J	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.16 J		
Anthracene	350	190000	23000	0.18 J	0.39 U	0.4 U	3.8 U	0.4 U	0.046 J	0.4 U	0.4 U	0.02 J	0.078 J	0.37 U	0.39 U	6.1		
Benzo (A) Anthracene	340	190000	21	0.42 J	0.39 U	0.4 U	3.8 U	0.4 U	0.066 J	0.4 U	0.4 U	0.033 J	0.39 U	0.37 U	0.39 U	3		
Benzo (a) Pyrene	46	190000	2.1	0.89 J	0.39 U	0.4 U	0.14 J	0.4 U	0.036 J	0.4 U	0.4 U	0.018 J	0.39 U	0.37 U	0.39 U	0.84		
Benzo (b) Fluoranthene	170	190000	21	1.2 J	0.39 U	0.4 U	0.13 J	0.4 U	0.045 J	0.4 U	0.4 U	0.026 J	0.39 U	0.37 U	0.39 U	1.6		
Benzo (g,h,i) Perylene	180	190000		0.81 J	0.39 U	0.4 U	0.23 J	0.4 U	0.027 J	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.25 J		
Benzo (k) Fluoranthene	610	190000	210	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.021 J	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Bis(2-Chloroethoxy) Methane	29	10000	250	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Bis(2-Chloroethyl) Ether	0.076	7.6	1	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Bis(2-Chloroisopropyl) Ether	30	250	4700	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Bis(2-Ethylhexyl) Phthalate	130	10000	160	3.9 U	0.11 J	0.4 U	3.8 U	0.4 U	0.38 U	0.25 J	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Butylbenzylphthalate	10000	10000	1200	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Carbazole	89	190000		0.15 J	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.21 J		
Chrysene	230	190000	2100	0.82 J	0.39 U	0.4 U	3.8 U	0.4 U	0.073 J	0.4 U	0.4 U	0.032 J	0.39 U	0.37 U	0.39 U	2.9		
Dibenzo (a,h) Anthracene	270	190000	2.1	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.15 J		
Dibenzofuran	250	190000	120	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.064 J	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.49		
Diethylphthalate	7800	10000	66000	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.049 J	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Dimethylphthalate				3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Di-n-Butylphthalate	4000	10000	8200	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Di-n-octylphthalate	10000	10000	820	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Fluoranthene	3200	190000	3000	1.2 J	0.39 U	0.4 U	0.23 J	0.4 U	0.25 J	0.4 U	0.4 U	0.11 J	0.45	0.37 U	0.39 U	14		
Fluorene	3800	190000	3000	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.084 J	0.4 U	0.4 U	0.031 J	0.39 U	0.37 U	0.39 U	1.6		
Hexachlorobenzene	0.96	190000	0.96	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Hexachlorobutadiene	42	10000	5.3	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Hexachlorocyclopentadiene	91	10000	0.75	19 U	1.9 U	2 U	18 U	1.9 U	1.8 U	2 U	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	2 U		
Hexachloroethane	0.56	270	8	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	0.2	190000	38															
Indeno (1,2,3-cd) Pyrene	18000	190000	21	0.55 J	0.39 U	0.4 U	0.11 J	0.4 U	0.022 J	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.28 J		
Isophorone	10	10000	2400	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Methyl-2,4,6-Trinitrophenylnitramine			230															
Naphthalene	25	77	8.6	0.25 J	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.027 J		
Nitrobenzene	0.63	63	22	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Nitroglycerine	0.5	10000	8.2															
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
N-Nitrosodiphenylamine	15	990	470	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Octahydro-Tetranitro-1,3,5,7-Tetrazocine	40	190000	5700															
Pentachlorophenol	5	190000	4	19 U	1.9 U	2 U	18 U	1.9 U	1.8 U	2 U	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	2 U		
Pentaerythritol tetranitrate			530															
Phenanthrene	10000	190000		0.2 J	0.39 U	0.4 U	0.15 J	0.4 U	0.15 J	0.4 U	0.4 U	0.071 J	0.55	0.37 U	0.39 U	15		
Phenol	200	18000	25000	3.9 U	0.39 U	0.4 U	3.8 U	0.4 U	0.38 U	0.4 U	0.4 U	0.39 U	0.39 U	0.37 U	0.39 U	0.4 U		
Picric acid			160															
Pyrene	2200	190000	2300	3.3 J	0.39 U	0.4 U	0.26 J	0.4 U	0.22 J	0.4 U	0.4 U	0.089 J	0.18 J	0.37 U	0.39 U	8.3		
Total Solids																		
Percent Solids																		
Petroleum Hydrocarbons																		
N-Hexane Extractable Material				5150	201 U	2400	194 U	201 U	1360	204 U	205 U	422	197 U	186 U	199 U	497		
Volatile Organic Compound																		
1,1,1,2-Tetrachloroethane	18	340	8.8	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
1,1,1-Trichloroethane	20	10000	3600	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
1,1,2,2-Tetrachloroethane	0.43	44	2.7	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
1,1,2-Trichloroethane	0.5	18	0.63	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
1,1-Dichloroethane	16	1600	16	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
1,1-Dichloroethene	0.7	10000	100	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
1,2,4-Trimethylbenzene	300	5400	180														410	0.0013 J
1,2-Dibromoethane	0.005	4.2	0.16	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
1,2-Dichloroethane	0.5	98	2	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
1,2-Dichloropropane	0.5	0.69	6.6	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
1,3,5-Trimethylbenzene	93	5400	150														120	0.0058 U
1,4-Dioxane	2.7	510	24	1.2 U	1 U	1 U	0.96 U	1 U	1 U	1 U	1 U	0.96 U	0.98 U	1 U	1 U	1.1 U		
2-Butanone	400	10000	19000	0.023 U	0.02 U	0.02 U	0.019 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.022 U		
2-Hexanone	26	2700	130	0.023 U	0.02 U	0.02 U	0.019 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.022 U		

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	NPA-CS-001 1 - 2 8/4/10	NPA-CS-002 2.5 - 3 8/4/10	NPA-CS-003 2.5 - 3 8/4/10	NPA-CS-004 2 - 3 8/4/10	NPA-CS-005 2.5 - 3 8/4/10	NPA-CS-006 2 - 2.5 8/4/10	NPA-CS-007 3.5 - 4 8/4/10	NPA-CS-007 Dup 3.5 - 4 8/4/10	NPA-CS-008 1.5 - 2 8/4/10	NPA-CS-009 3 - 3.5 8/4/10	NPA-CS-010 1.5 - 2 8/4/10	NPA-CS-011 3.5 - 4 8/4/10	NPA-CS-012 1.5 - 2 8/4/10	NPA-EX-005 3 - 4 7/14/10	NPA-EX-006 3 - 4 7/14/10
4-Methyl-2-Pentanone	780	10000	14000	0.023 U	0.02 U	0.02 U	0.019 U	0.021 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.022 U		
Acetone	8800	10000	110000	0.023 U	0.02 U	0.0058 J	0.013 J	0.021 U	0.02 U	0.0068 J	0.0051 J	0.019 U	0.02 U	0.0087 J	0.02 U	0.015 J		
Acrylonitrile	0.37	37	1.1	0.12 U	0.1 U	0.1 U	0.096 U	0.1 U	0.1 U	0.1 U	0.1 U	0.096 U	0.098 U	0.1 U	0.1 U	0.11 U		
Benzene	0.5	330	5.1	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U	28 U	0.0058 U
Bromochloromethane	9	3600	63	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Bromodichloromethane	8	69	1.3	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Bromoform	8	2300	86	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Bromomethane	1	460	3	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Carbon Disulfide	620	10000	350	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Carbon Tetrachloride	0.5	430	2.9	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Chlorobenzene	10	4500	130	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Chlorodibromomethane	8	10000	39	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Chloroethane	8800	10000	2300	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Chloroform	8	110	1.4	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Chloromethane	3	1400	46	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
cis-1,2-Dichloroethene	7	10000	230	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
cis-1,3-Dichloropropene	2.7	640	8.2	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Ethylbenzene	70	1000	25	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U	24 J	0.0058 U
Isopropylbenzene	2500	10000	990														23 J	0.0058 U
Methyl tert-butyl ether	2	9800	210	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U	28 U	0.0058 U
Methylene chloride	0.5	10000	320	0.0034 J B	0.0025 J B	0.0025 J B	0.0025 J B	0.0026 J B	0.0024 J B	0.0023 J B	0.0029 J B	0.0029 J B	0.0029 J B	0.0028 J B	0.0027 J B	0.005 J B		
Naphthalene	25	77	8.6														23 J	0.0058 U
Styrene	24	10000	3500	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Tetrachloroethene	0.5	3600	39	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Toluene	100	10000	4700	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U	14 J	0.0058 U
trans-1,2-Dichloroethene	10	10000	30	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
trans-1,3-Dichloropropene [2]	2.7	640	8.2	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Trichloroethene	0.5	180	1.9	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Vinyl Chloride	0.2	290	1.7	0.0059 U	0.0051 U	0.0051 U	0.0048 U	0.0052 U	0.0051 U	0.0051 U	0.005 U	0.0048 U	0.0049 U	0.005 U	0.0051 U	0.0055 U		
Xylenes (Total)	1000	9100	250	0.018 U	0.015 U	0.015 U	0.014 U	0.016 U	0.015 U	0.015 U	0.015 U	0.014 U	0.015 U	0.015 U	0.015 U	0.017 U	240	

Notes:

Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	NPA-SB-007 3 - 4 7/16/10	NPA-SB-008 3 - 4 7/16/10	NPA-SB-009 3 - 4 7/16/10	NPA-SB-010 3 - 4 7/16/10	NPA-SB-011 3 - 4 7/16/10	NPA-SB-012 3 - 4 7/16/10	NPA-SB-013 5 - 6 7/16/10	NPA-SB-014 5 - 6 7/16/10	NPA-SB-015 3 - 4 7/16/10	NPA-SB-016 3 - 4 7/16/10	NPA-SB-017 1.5 - 2.5 7/16/10	NPA-SB-018 1.5 - 2.5 7/16/10	B45T-SB-006 12 - 12.5 5/4/11	B45T-SB-006 7 - 7.5 5/4/11	B45T-SB-008 10.3 - 10.8 5/4/11	B45T-SB-008 5.5 - 6 5/4/11
Cyanide, Free																			
Cyanide, Free	200	190000	15																
Cyanide, Total																			
Cyanide, Total	200	190000	15																
METAL																			
Antimony	27	190000	47	0.076 B	0.089 B	0.54	0.14 B	0.084 B	0.038 B	0.085 B	0.05 B	0.037 B	0.41	0.23 B	0.16 B				
Arsenic	29	190000	3	11.3	6.4	4.7	5.9	1.2	0.4	3.5	5.6	0.17	5.5	6.1	8.8				
Barium	8200	190000	22000	31.2	37	10.2	62.9	25.8	39.6	58.3	37.6	35.1	34.8	21.8	44.5				
Beryllium	320	190000	230	0.54	0.46	0.6	0.38	0.39	0.22	0.58	0.57	0.2	0.33	0.23	0.49				
Cadmium	38	190000	10	0.076 B	0.07 B	0.28	0.066 B	0.048 B	0.038 B	0.15	0.13	0.079 B	0.98	0.61	0.25				
Chromium	190	140000	6.3	12.2 J	9.1 J	18.6 J	23.9 J	12.4 J	5.9 J	12.3 J	10.4 J	7.6 J	30.1 J	12.8 J	10.4 J				
Copper	43000	190000	4700	3.1	3.4	14.7	8.5	5.4	2.3	4.3	4.4	2.5	20.3	66.1	45.2				
Hexavalent Chromium	190	140000	6.3																
Lead	450	190000	800	11.2	10.2	11.7	12	68	10.1	15.4	12.8	9.9	408	32.1	26.6				
Mercury	10	190000	4.6	0.1	0.026 B	0.022 B	0.031 B	0.04	0.039 U	0.042 B	0.021 B	0.039 U	0.083	0.077	0.015 B				
Nickel	650	190000	2200	2.6	4.8	15.1	11.8	1.8	1.3	19.7	4.4	2.1	22.2	23.9	10.6				
Selenium	26	190000	580	0.45 B J	0.42 B J	0.34 B J	0.37 B J	0.29 B J	0.25 B J	0.58 B J	0.56 B J	0.31 B J	0.53 B J	0.43 B J	0.42 B J				
Silver	84	190000	580	0.021 B	0.02 B	0.034 B	0.016 B	0.013 B	0.012 B	0.028 B	0.021 B	0.017 B	0.59	0.036 B	0.053 B				
Thallium	14	190000	1.2	0.19	0.22	0.072 B	0.18	0.12	0.14	0.28	0.16	0.1 B	0.13	0.29	0.41				
Vanadium	680	190000	580	16.7 J	17.1 J	31 J	22.2 J	20.8 J	14.2 J	23.8 J	15.2 J	9.7 J	18.7 J	14.2 J	21.3 J				
Zinc	12000	190000	35000	5.4	4.1	15.6	9.6	3.5	3.5	11.1	7.2	4.1	23.1	29.9	18.2				
Polychlorinated Biphenols																			
Aroclor-1016	190	10000	5.1									0.02 U	0.22 U	0.097 U	0.042 U				
Aroclor-1221	0.68	27	0.83									0.02 U	0.22 U	0.097 U	0.042 U				
Aroclor-1232	0.54	10000	0.72									0.02 U	0.22 U	0.097 U	0.042 U				
Aroclor-1242	17	10000	0.95									0.02 U	0.22 U	0.097 U	0.042 U				
Aroclor-1248	67	10000	0.94									0.02 U	0.22 U	0.097 U	0.042 U				
Aroclor-1254	380	10000	0.97									0.051	0.22 U	0.097 U	0.042 U				
Aroclor-1260	630	190000	0.99									0.047	13	4.9	2.1				
Percent Solids																			
Percent Solids																84.2	84.3	83.2	85.2
pH																			
pH																			
Sulfide, Total																			
Sulfide, Total																			
Semi Volatile Organic Compound																			
1,2,4-Trichlorobenzene	27	190	26									0.39 U	43 U	19 U	0.81 U				
1,2-Dichlorobenzene	60	10000	930									0.39 U	43 U	19 U	0.81 U				
1,3,5-Trinitrobenzene			3200																
1,3-Dichlorobenzene	61	10000										0.39 U	43 U	19 U	0.81 U				
1,3-Dinitrobenzene	0.1	190000	8.2																
1,4-Dichlorobenzene	10	230	11									0.39 U	43 U	19 U	0.81 U				
1-Methylnaphthalene			73																
2,4,5-Trichlorophenol	5900	190000	8200									0.39 U	43 U	19 U	0.81 U				
2,4,6-Trichlorophenol	28	190000	82									0.39 U	43 U	19 U	0.81 U				
2,4,6-Trinitrotoluene	0.2	190000	51																
2,4-Dichlorophenol	2	190000	250									0.39 U	43 U	19 U	0.81 U				
2,4-Dimethylphenol	190	10000	1600									0.39 U	43 U	19 U	0.81 U				
2,4-Dinitrophenol	19	190000	160									2 U	220 U	100 U	4.2 U				
2,4-Dinitrotoluene	0.88	190000	7.4									0.39 U	43 U	19 U	0.81 U				
2,6-Dinitrotoluene	0.18	190000	1.5									0.39 U	43 U	19 U	0.81 U				
2-Amino-4,6-Dinitrotoluene			11																
2-Chloronaphthalene	17000	190000	6000									0.39 U	43 U	19 U	0.81 U				
2-Chlorophenol	4.4	10000	580									0.39 U	43 U	19 U	0.81 U				
2-Methylnaphthalene	100	270	300									0.022 J	2.3 J	0.84 J	0.085 J				
2-Methylphenol	490	190000	4100									0.39 U	43 U	19 U	0.81 U				
2-Nitroaniline	0.044	4.5	800									2 U	220 U	100 U	4.2 U				
2-Nitrophenol	78	190000										0.39 U	43 U	19 U	0.81 U				
2-Nitrotoluene			15																
3-& 4-Methylphenol [1]	49	190000	1600									0.39 U	43 U	19 U	0.81 U				
3,3'-Dichlorobenzidine	33	190000	5.1									1.9 U	210 U	94 U	3.9 U				
3-Nitroaniline												2 U	220 U	100 U	4.2 U				
3-Nitrotoluene			8.2																
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6									2 U	220 U	100 U	4.2 U				
4-Amino-2,6-Dinitrotoluene			11																
4-Bromophenyl phenyl ether												0.39 U	43 U	19 U	0.81 U				
4-Chloro-3-Methyl-Phenol	2000	190000	8200									0.39 U	43 U	19 U	0.81 U				

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	NPA-SB-007 3 - 4 7/16/10	NPA-SB-008 3 - 4 7/16/10	NPA-SB-009 3 - 4 7/16/10	NPA-SB-010 3 - 4 7/16/10	NPA-SB-011 3 - 4 7/16/10	NPA-SB-012 3 - 4 7/16/10	NPA-SB-013 5 - 6 7/16/10	NPA-SB-014 5 - 6 7/16/10	NPA-SB-015 3 - 4 7/16/10	NPA-SB-016 3 - 4 7/16/10	NPA-SB-017 1.5 - 2.5 7/16/10	NPA-SB-018 1.5 - 2.5 7/16/10	B45T-SB-006 12 - 12.5 5/4/11	B45T-SB-006 7 - 7.5 5/4/11	B45T-SB-008 10.3 - 10.8 5/4/11	B45T-SB-008 5.5 - 6 5/4/11
4-Chloroaniline	1.8	190000	11									0.39 U	43 U	19 U	0.81 U				
4-Chlorodiphenyl Ether												0.39 U	43 U	19 U	0.81 U				
4-Nitroaniline	14	190000	110									2 U	220 U	100 U	4.2 U				
4-Nitrophenol	6	190000										2 U	220 U	100 U	4.2 U				
4-Nitrotoluene			140																
Acenaphthene	4700	190000	4500									0.057 J	11 J	1.3 J	0.13 J				
Acenaphthylene	6600	190000										0.39 U	43 U	19 U	0.81 U				
Anthracene	350	190000	23000									0.02 J	4.4 J	0.55 J	0.094 J				
Benzo (A) Anthracene	340	190000	21									0.037 J	3.7 J	2 J	0.19 J				
Benzo (a) Pyrene	46	190000	2.1									0.026 J	3 J	1.4 J	0.19 J				
Benzo (b) Fluoranthene	170	190000	21									0.049 J	3.6 J	2.9 J	0.34 J				
Benzo (g,h,i) Perylene	180	190000										0.39 U	43 U	1 J	0.15 J				
Benzo (k) Fluoranthene	610	190000	210									0.39 U	43 U	19 U	0.81 U				
Bis(2-Chloroethoxy) Methane	29	10000	250									0.39 U	43 U	19 U	0.81 U				
Bis(2-Chloroethyl) Ether	0.076	7.6	1									0.39 U	43 U	19 U	0.81 U				
Bis(2-Chloroisopropyl) Ether	30	250	4700									0.39 U	43 U	19 U	0.81 U				
Bis(2-Ethylhexyl) Phthalate	130	10000	160									0.095 J	43 U	19 U	0.21 J				
Butylbenzylphthalate	10000	10000	1200									0.39 U	43 U	19 U	0.81 U				
Carbazole	89	190000										0.39 U	43 U	19 U	0.81 U				
Chrysene	230	190000	2100									0.062 J	6.4 J	1.8 J	0.2 J				
Dibenzo (a,h) Anthracene	270	190000	2.1									0.39 U	43 U	19 U	0.81 U				
Dibenzofuran	250	190000	120									0.39 U	5.5 J	19 U	0.81 U				
Diethylphthalate	7800	10000	66000									0.39 U	43 U	19 U	0.81 U				
Dimethylphthalate												0.39 U	43 U	19 U	0.81 U				
Di-n-Butylphthalate	4000	10000	8200									0.39 U	43 U	19 U	0.81 U				
Di-n-octylphthalate	10000	10000	820									0.39 U	43 U	19 U	0.81 U				
Fluoranthene	3200	190000	3000									0.097 J	17 J	3.2 J	0.55 J				
Fluorene	3800	190000	3000									0.043 J	7.8 J	0.59 J	0.12 J				
Hexachlorobenzene	0.96	190000	0.96									0.39 U	43 U	19 U	0.81 U				
Hexachlorobutadiene	42	10000	5.3									0.39 U	43 U	19 U	0.81 U				
Hexachlorocyclopentadiene	91	10000	0.75									1.9 U	210 U	94 U	3.9 U				
Hexachloroethane	0.56	270	8									0.39 U	43 U	19 U	0.81 U				
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	0.2	190000	38																
Indeno (1,2,3-cd) Pyrene	18000	190000	21									0.025 J	43 U	19 U	0.1 J				
Isophorone	10	10000	2400									0.39 U	43 U	19 U	0.81 U				
Methyl-2,4,6-Trinitrophenylnitramine			230																
Naphthalene	25	77	8.6									0.024 J	2.4 J	1.4 J	0.079 J				
Nitrobenzene	0.63	63	22									0.39 U	43 U	19 U	0.81 U				
Nitroglycerine	0.5	10000	8.2																
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33									0.39 U	43 U	19 U	0.81 U				
N-Nitrosodiphenylamine	15	990	470									0.39 U	43 U	19 U	0.81 U				
Octahydro-Tetranitro-1,3,5,7-Tetrazocine	40	190000	5700																
Pentachlorophenol	5	190000	4									1.9 U	210 U	94 U	3.9 U				
Pentaerythritol tetranitrate			530																
Phenanthrene	10000	190000										0.088 J	19 J	1.2 J	0.81				
Phenol	200	18000	25000									0.39 U	43 U	19 U	0.81 U				
Picric acid			160																
Pyrene	2200	190000	2300									0.14 J	25 J	9.8 J	0.75 J				
Total Solids																			
Percent Solids																			
Petroleum Hydrocarbons																			
N-Hexane Extractable Material																			
Volatile Organic Compound																			
1,1,1,2-Tetrachloroethane	18	340	8.8	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
1,1,1-Trichloroethane	20	10000	3600	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
1,1,2,2-Tetrachloroethane	0.43	44	2.7	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
1,1,2-Trichloroethane	0.5	18	0.63	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
1,1-Dichloroethane	16	1600	16	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
1,1-Dichloroethene	0.7	10000	100	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
1,2,4-Trimethylbenzene	300	5400	180													0.0059	0.005 U	11	22
1,2-Dibromoethane	0.005	4.2	0.16	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
1,2-Dichloroethane	0.5	98	2	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
1,2-Dichloropropane	0.5	0.69	6.6	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
1,3,5-Trimethylbenzene	93	5400	150													0.0016 J	0.005 U	3.1	6.1
1,4-Dioxane	2.7	510	24	1.1 U	1.1 U	1.2 U	1 U	0.89 U	1 U	1.2 U	1.1 U	1 U	98 U	99 U	55 U				
2-Butanone	400	10000	19000	0.021 U	0.021 U	0.023 U	0.02 U	0.018 U	0.021 U	0.0035 J	0.021 U	0.02 U	2 U	2 U	1.1 U				
2-Hexanone	26	2700	130	0.021 U	0.021 U	0.023 U	0.02 U	0.018 U	0.021 U	0.024 U	0.021 U	0.02 U	2 U	2 U	1.1 U				

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	NPA-SB-007 3 - 4 7/16/10	NPA-SB-008 3 - 4 7/16/10	NPA-SB-009 3 - 4 7/16/10	NPA-SB-010 3 - 4 7/16/10	NPA-SB-011 3 - 4 7/16/10	NPA-SB-012 3 - 4 7/16/10	NPA-SB-013 5 - 6 7/16/10	NPA-SB-014 5 - 6 7/16/10	NPA-SB-015 3 - 4 7/16/10	NPA-SB-016 3 - 4 7/16/10	NPA-SB-017 1.5 - 2.5 7/16/10	NPA-SB-018 1.5 - 2.5 7/16/10	B45T-SB-006 12 - 12.5 5/4/11	B45T-SB-006 7 - 7.5 5/4/11	B45T-SB-008 10.3 - 10.8 5/4/11	B45T-SB-008 5.5 - 6 5/4/11
4-Methyl-2-Pentanone	780	10000	14000	0.021 U	0.021 U	0.023 U	0.02 U	0.018 U	0.021 U	0.024 U	0.021 U	0.02 U	2 U	2 U	1.1 U				
Acetone	8800	10000	110000	0.021 U	0.021 U	0.023 U	0.02 U	0.018 U	0.021 U	0.024 U	0.021 U	0.02 U	2 U	2 U	1.1 U				
Acrylonitrile	0.37	37	1.1	0.11 U	0.11 U	0.12 U	0.1 U	0.089 U	0.1 U	0.12 U	0.11 U	0.1 U	9.8 U	9.9 U	5.5 U				
Benzene	0.5	330	5.1	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U	0.0049 U	0.005 U	2.6 U	2.8 U
Bromochloromethane	9	3600	63	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Bromodichloromethane	8	69	1.3	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Bromoform	8	2300	86	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Bromomethane	1	460	3	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Carbon Disulfide	620	10000	350	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Carbon Tetrachloride	0.5	430	2.9	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Chlorobenzene	10	4500	130	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.13 J	0.49 U	0.27 U				
Chlorodibromomethane	8	10000	39	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Chloroethane	8800	10000	2300	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Chloroform	8	110	1.4	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Chloromethane	3	1400	46	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
cis-1,2-Dichloroethene	7	10000	230	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.0018 J	0.0054 U	0.0051 U	0.15 J	0.33 J	0.063 J				
cis-1,3-Dichloropropene	2.7	640	8.2	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Ethylbenzene	70	1000	25	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.33 J	0.23 J	0.24 J	0.0035 J	0.005 U	1.2 J	2.5 J
Isopropylbenzene	2500	10000	990													0.00094 J	0.005 U	0.62 J	1.1 J
Methyl tert-butyl ether	2	9800	210	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U	0.0019 J	0.005 U	2.6 U	2.8 U
Methylene chloride	0.5	10000	320	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.033	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Naphthalene	25	77	8.6													0.0049 U	0.005 U	2.7	4.8
Styrene	24	10000	3500	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Tetrachloroethene	0.5	3600	39	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Toluene	100	10000	4700	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.13 J	0.17 J	0.12 J	0.003 J	0.005 U	1.7 J	3.5
trans-1,2-Dichloroethene	10	10000	30	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
trans-1,3-Dichloropropene [2]	2.7	640	8.2	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Trichloroethene	0.5	180	1.9	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.0029 J	0.0023 J	0.0051 U	0.49 U	0.49 U	0.27 U				
Vinyl Chloride	0.2	290	1.7	0.0053 U	0.0054 U	0.0058 U	0.005 U	0.0045 U	0.0052 U	0.006 U	0.0054 U	0.0051 U	0.49 U	0.49 U	0.27 U				
Xylenes (Total)	1000	9100	250	0.016 U	0.016 U	0.017 U	0.015 U	0.013 U	0.016 U	0.018 U	0.016 U	0.015 U	1.1 J	0.83 J	0.81 J	0.013 J	0.015 U	10	22

Notes:

Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B40T-TP-001 5 - 5.5 6/9/11	B51H-CS-001 1 - 1.5 8/24/11	B51H-CS-002 1 - 1.5 8/24/11	B51H-CS-003 1 - 1.5 8/24/11	B51H-CS-004 1 - 1.5 8/24/11	B51H-CS-005 1 - 1.5 8/24/11	B51H-CS-006 1 - 1.5 8/24/11	B51H-CS-007 1 - 1.5 8/24/11	B51H-CS-008 1 - 1.5 8/24/11	B51H-CS-009 1 - 1.5 8/24/11	B51H-CS-010 1 - 1.5 8/24/11	B51H-CS-011 1 - 1.5 8/24/11	B51H-CS-012 1 - 1.5 8/24/11	B51H-CS-012 Dup 1 - 1.5 8/24/11
Cyanide, Free																	
Cyanide, Free	200	190000	15		0.048 U	0.045 U	0.046 U	0.046 U	0.046 U	0.043 U	0.045 U	0.045 U	0.044 U	0.043 U	0.044 U	0.045 U	0.045 U
Cyanide, Total																	
Cyanide, Total	200	190000	15		0.6 U	0.56 U	0.57 U	0.57 U	0.58 U	0.54 U	0.56 U	0.57 U	0.56 U	0.54 U	0.56 U	0.57 U	0.56 U
METAL																	
Antimony	27	190000	47	1.2 U	0.16 J	0.1 J	0.044 J	0.076 J	0.082 J	0.023 J	0.044 J	0.036 J	0.1 J	0.1 J	0.14 J	0.12 J	0.11 J
Arsenic	29	190000	3	5.1	1.5	3	6.7	3.9	2.1	1.6	1.4	1.5	3.9	0.79	22	9.1	8.7
Barium	8200	190000	22000		140 B	58 B	70 B	89 B	89 B	68 B	88 B	97 B	87 B	62 B	72 B	68 B	60 B
Beryllium	320	190000	230	0.63	0.54	0.41	0.71	0.59	0.48	0.4	0.39	0.52	0.38	0.29	0.72	0.52	0.54
Cadmium	38	190000	10	0.58 U	0.074 J	0.052 J	0.065 J	0.11	0.095 J	0.051 J	0.061 J	0.053 J	0.08 J	0.039 J	0.091 J	0.081 J	0.059 J
Chromium	190	140000	6.3	12	13 B	12 B	12 B	12 B	12 B	14 B	9.9 B	33 B	130 B	9.4 B	16 B	11 B	13 B
Copper	43000	190000	4700	6.6	7.7 J	7.7 J	3.9 J	8 J	8 J	3.3 J	5 J	3.9 J	8.5 J	1.7 J	11 J	6.8 J	8.3 J
Hexavalent Chromium	190	140000	6.3		0.38 J	1.2	0.25 J	0.6	0.55	0.43 U	0.48	6.2	7.7	1.2	0.36 J	0.36 J	0.25 J
Lead	450	190000	800	9.3	9.4	8.3	12	17	12	6.5	10	12	9.4	7.8	11	10	9.7
Mercury	10	190000	4.6	0.024 J	0.039 U	0.059	0.015 J	0.019 J	0.015 J	0.035 U	0.02 J	0.018 J	0.025 J	0.015 J	0.02 J	0.03 J	0.032 J
Nickel	650	190000	2200	5.5	9.1	4.1	4.9	8.9	13	8.6	13	9.8	18	2.5	6.3	3.4	3.8
Selenium	26	190000	580	0.58 U	0.7	0.52 U	0.77	0.49 U	0.55 U	0.49 U	0.52 U	0.50 U	0.51 U	0.50 U	0.53 U	0.52 U	0.52 U
Silver	84	190000	580	0.58 U	0.11 U	0.1 U	0.11 U	0.097 U	0.11 U	0.097 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U
Thallium	14	190000	1.2	1.2 U	0.18	0.11	0.11	0.13	0.16	0.08 J	0.11	0.094 J	0.11	0.064 J	0.11	0.098 J	0.088 J
Vanadium	680	190000	580		15	16	14	15	18	6.7	12	7.5	15	5.5	14	16	14
Zinc	12000	190000	35000	18 B	19 J	13 J	15 J	25 J	21 J	12 J	17 J	11 J	18 J	7.2 J	15 J	9.8 J	9.2 J
Polychlorinated Biphenols																	
Aroclor-1016	190	10000	5.1														
Aroclor-1221	0.68	27	0.83														
Aroclor-1232	0.54	10000	0.72														
Aroclor-1242	17	10000	0.95														
Aroclor-1248	67	10000	0.94														
Aroclor-1254	380	10000	0.97														
Aroclor-1260	630	190000	0.99														
Percent Solids																	
Percent Solids																	
pH																	
pH																	
Sulfide, Total																	
Sulfide, Total																	
Semi Volatile Organic Compound																	
1,2,4-Trichlorobenzene	27	190	26														
1,2-Dichlorobenzene	60	10000	930														
1,3,5-Trinitrobenzene			3200														
1,3-Dichlorobenzene	61	10000															
1,3-Dinitrobenzene	0.1	190000	8.2														
1,4-Dichlorobenzene	10	230	11														
1-Methylnaphthalene			73														
2,4,5-Trichlorophenol	5900	190000	8200														
2,4,6-Trichlorophenol	28	190000	82														
2,4,6-Trinitrotoluene	0.2	190000	51														
2,4-Dichlorophenol	2	190000	250														
2,4-Dimethylphenol	190	10000	1600														
2,4-Dinitrophenol	19	190000	160														
2,4-Dinitrotoluene	0.88	190000	7.4														
2,6-Dinitrotoluene	0.18	190000	1.5														
2-Amino-4,6-Dinitrotoluene			11														
2-Chloronaphthalene	17000	190000	6000														
2-Chlorophenol	4.4	10000	580														
2-Methylnaphthalene	100	270	300														
2-Methylphenol	490	190000	4100														
2-Nitroaniline	0.044	4.5	800														
2-Nitrophenol	78	190000															
2-Nitrotoluene			15														
3-& 4-Methylphenol [1]	49	190000	1600														
3,3'-Dichlorobenzidine	33	190000	5.1														
3-Nitroaniline																	
3-Nitrotoluene			8.2														
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6														
4-Amino-2,6-Dinitrotoluene			11														
4-Bromophenyl phenyl ether																	
4-Chloro-3-Methyl-Phenol	2000	190000	8200														

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B40T-TP-001 5 - 5.5 6/9/11	B51H-CS-001 1 - 1.5 8/24/11	B51H-CS-002 1 - 1.5 8/24/11	B51H-CS-003 1 - 1.5 8/24/11	B51H-CS-004 1 - 1.5 8/24/11	B51H-CS-005 1 - 1.5 8/24/11	B51H-CS-006 1 - 1.5 8/24/11	B51H-CS-007 1 - 1.5 8/24/11	B51H-CS-008 1 - 1.5 8/24/11	B51H-CS-009 1 - 1.5 8/24/11	B51H-CS-010 1 - 1.5 8/24/11	B51H-CS-011 1 - 1.5 8/24/11	B51H-CS-012 1 - 1.5 8/24/11	B51H-CS-012 Dup 1 - 1.5 8/24/11
4-Chloroaniline	1.8	190000	11														
4-Chlorodiphenyl Ether																	
4-Nitroaniline	14	190000	110														
4-Nitrophenol	6	190000															
4-Nitrotoluene			140														
Acenaphthene	4700	190000	4500														
Acenaphthylene	6600	190000															
Anthracene	350	190000	23000														
Benzo (A) Anthracene	340	190000	21														
Benzo (a) Pyrene	46	190000	2.1														
Benzo (b) Fluoranthene	170	190000	21														
Benzo (g,h,i) Perylene	180	190000															
Benzo (k) Fluoranthene	610	190000	210														
Bis(2-Chloroethoxy) Methane	29	10000	250														
Bis(2-Chloroethyl) Ether	0.076	7.6	1														
Bis(2-Chloroisopropyl) Ether	30	250	4700														
Bis(2-Ethylhexyl) Phthalate	130	10000	160														
Butylbenzylphthalate	10000	10000	1200														
Carbazole	89	190000															
Chrysene	230	190000	2100														
Dibenzo (a,h) Anthracene	270	190000	2.1														
Dibenzofuran	250	190000	120														
Diethylphthalate	7800	10000	66000														
Dimethylphthalate																	
Di-n-Butylphthalate	4000	10000	8200														
Di-n-octylphthalate	10000	10000	820														
Fluoranthene	3200	190000	3000														
Fluorene	3800	190000	3000														
Hexachlorobenzene	0.96	190000	0.96														
Hexachlorobutadiene	42	10000	5.3														
Hexachlorocyclopentadiene	91	10000	0.75														
Hexachloroethane	0.56	270	8														
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	0.2	190000	38														
Indeno (1,2,3-cd) Pyrene	18000	190000	21														
Isophorone	10	10000	2400														
Methyl-2,4,6-Trinitrophenylnitramine			230														
Naphthalene	25	77	8.6														
Nitrobenzene	0.63	63	22														
Nitroglycerine	0.5	10000	8.2														
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33														
N-Nitrosodiphenylamine	15	990	470														
Octahydro-Tetranitro-1,3,5,7-Tetrazocine	40	190000	5700														
Pentachlorophenol	5	190000	4														
Pentaerythritol tetranitrate			530														
Phenanthrene	10000	190000															
Phenol	200	18000	25000														
Picric acid			160														
Pyrene	2200	190000	2300														
Total Solids																	
Percent Solids																	
Petroleum Hydrocarbons																	
N-Hexane Extractable Material																	
Volatile Organic Compound																	
1,1,1,2-Tetrachloroethane	18	340	8.8		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
1,1,1-Trichloroethane	20	10000	3600		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
1,1,2,2-Tetrachloroethane	0.43	44	2.7		0.0055 UJ	0.0047 UJ	0.0052 UJ	0.005 UJ	0.0048 UJ	0.0046 UJ	0.0053 UJ	0.0052 UJ	0.005 UJ	0.0046 UJ	0.0047 UJ	0.0047 UJ	0.0053 UJ
1,1,2-Trichloroethane	0.5	18	0.63		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
1,1-Dichloroethane	16	1600	16		0.0055 UJ	0.0047 UJ	0.0052 UJ	0.005 UJ	0.0048 UJ	0.0046 UJ	0.0053 UJ	0.0052 UJ	0.005 UJ	0.0046 UJ	0.0047 UJ	0.0047 UJ	0.0053 UJ
1,1-Dichloroethene	0.7	10000	100		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
1,2,4-Trimethylbenzene	300	5400	180														
1,2-Dibromoethane	0.005	4.2	0.16		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
1,2-Dichloroethane	0.5	98	2		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
1,2-Dichloropropane	0.5	0.69	6.6		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
1,3,5-Trimethylbenzene	93	5400	150														
1,4-Dioxane	2.7	510	24		1.1 U	0.94 U	1 U	1 U	0.95 U	0.93 U	1.1 U	1 U	1 U	0.93 U	0.94 U	0.94 U	1.1 U
2-Butanone	400	10000	19000		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
2-Hexanone	26	2700	130		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B40T-TP-001 5 - 5.5 6/9/11	B51H-CS-001 1 - 1.5 8/24/11	B51H-CS-002 1 - 1.5 8/24/11	B51H-CS-003 1 - 1.5 8/24/11	B51H-CS-004 1 - 1.5 8/24/11	B51H-CS-005 1 - 1.5 8/24/11	B51H-CS-006 1 - 1.5 8/24/11	B51H-CS-007 1 - 1.5 8/24/11	B51H-CS-008 1 - 1.5 8/24/11	B51H-CS-009 1 - 1.5 8/24/11	B51H-CS-010 1 - 1.5 8/24/11	B51H-CS-011 1 - 1.5 8/24/11	B51H-CS-012 1 - 1.5 8/24/11	B51H-CS-012 Dup 1 - 1.5 8/24/11
4-Methyl-2-Pentanone	780	10000	14000		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Acetone	8800	10000	110000		0.022 U	0.0076 J	0.01 J	0.013 J	0.019 U	0.019 U	0.014 J	0.011 J	0.012 J	0.019 U	0.019 U	0.019 U	0.021 U
Acrylonitrile	0.37	37	1.1		0.11 U	0.094 U	0.1 U	0.1 U	0.095 U	0.093 U	0.11 U	0.1 U	0.1 U	0.093 U	0.094 U	0.094 U	0.11 U
Benzene	0.5	330	5.1		0.0055 UJ	0.0047 UJ	0.0052 UJ	0.005 UJ	0.0048 UJ	0.0046 UJ	0.0053 UJ	0.0052 UJ	0.005 UJ	0.0046 UJ	0.0047 UJ	0.0047 UJ	0.0053 UJ
Bromochloromethane	9	3600	63		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Bromodichloromethane	8	69	1.3		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Bromoform	8	2300	86		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Bromomethane	1	460	3		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Carbon Disulfide	620	10000	350		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Carbon Tetrachloride	0.5	430	2.9		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Chlorobenzene	10	4500	130		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Chlorodibromomethane	8	10000	39		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Chloroethane	8800	10000	2300		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Chloroform	8	110	1.4		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Chloromethane	3	1400	46		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
cis-1,2-Dichloroethene	7	10000	230		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
cis-1,3-Dichloropropene	2.7	640	8.2		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Ethylbenzene	70	1000	25		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Isopropylbenzene	2500	10000	990														
Methyl tert-butyl ether	2	9800	210		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Methylene chloride	0.5	10000	320		0.0055 UJ	0.0047 UJ	0.0052 UJ	0.005 UJ	0.0048 UJ	0.0046 UJ	0.0053 UJ	0.0052 UJ	0.005 UJ	0.0046 UJ	0.0047 UJ	0.0047 UJ	0.0053 UJ
Naphthalene	25	77	8.6														
Styrene	24	10000	3500		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Tetrachloroethene	0.5	3600	39		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Toluene	100	10000	4700		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
trans-1,2-Dichloroethene	10	10000	30		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
trans-1,3-Dichloropropene [2]	2.7	640	8.2		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Trichloroethene	0.5	180	1.9		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Vinyl Chloride	0.2	290	1.7		0.0055 U	0.0047 U	0.0052 U	0.005 U	0.0048 U	0.0046 U	0.0053 U	0.0052 U	0.005 U	0.0046 U	0.0047 U	0.0047 U	0.0053 U
Xylenes (Total)	1000	9100	250		0.016 U	0.014 U	0.015 U	0.015 U	0.014 U	0.014 U	0.016 U	0.015 U	0.015 U	0.014 U	0.014 U	0.014 U	0.016 U

Notes:
Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41RAA15-CS-002 3 - 4 10/13/11	B41RAA15-CS-003 9 - 10 10/17/11	B41RAA15-CS-004 9 - 10 10/17/11	B41RAA15-CS-005 5 - 6 10/17/11	B41RAA16-CS-005 4 - 5 9/28/11	B41RAA16-CS-006 4 - 5 9/28/11	B41RAA16-CS-007 4 - 5 9/28/11	B41RAA16-CS-009 4.5 - 5 9/28/11	B41RAA16-CS-010 4.5 - 5 9/28/11	B41RAA16-CS-010 4.5 - 5 9/28/11	B41RAA16-CS-013 6 - 7 10/19/11
Cyanide, Free														
Cyanide, Free	200	190000	15	0.045 U	0.045 U	0.048 U	0.048 U	0.05 U	0.051 U	0.052 U	0.05 U	0.051 U	0.05 U	0.051 U
Cyanide, Total														
Cyanide, Total	200	190000	15	0.83	0.13 J	0.12 J	2.1	0.4 J	1.3	0.47 J	0.43 J	1.7	1.1	7.9
METAL														
Antimony	27	190000	47	0.1 J	0.069 J B	0.04 J B	0.087 J B	0.15 J	0.16 J	0.44	0.12 J	0.15 J	0.5	0.67
Arsenic	29	190000	3	12	2.4	3.9	3	6.1	6.3	8.5	5.7	6.3	5.2	4.1
Barium	8200	190000	22000	84 B	26	98	47	75	75	61	89	84	81	74
Beryllium	320	190000	230	0.45	0.26	0.38	0.33	0.56	0.64	1.3	0.42	0.63	0.53	0.57
Cadmium	38	190000	10	0.056 J	0.068 J	0.28	0.17	0.18	0.31	0.77	9	4.8	9.9	12
Chromium	190	140000	6.3	9.5 B	7.7 B	12 B	19 B	18 B	23 B	42 B	24 B	30 B	32 B	190 B
Copper	43000	190000	4700	7.5 B	5.4	6.9	8.9	9.9	10	23	8.8	11	11	37
Hexavalent Chromium	190	140000	6.3	0.78	1.2	1.6	3.1	1.9	3.4	1.4	0.87	3.1	3.7	11
Lead	450	190000	800	8 B	8.2 B	10 B	9.6 B	11	12	34	12	12	20	38
Mercury	10	190000	4.6	0.036 U	0.041	0.042	0.043	0.055	0.059	0.091	0.11	0.056	0.093	0.055
Nickel	650	190000	2200	4.1	4.1	11	17	9	16	28	7.7	21	13	400
Selenium	26	190000	580	0.54 U	0.32 J	0.47 J	0.3 J	0.47 J	0.77	1.1	0.48 J	0.47 J	0.76	0.45 J
Silver	84	190000	580	0.013 J	0.026 J	0.067 J	0.027 J	0.035 J	0.036 J	0.068 J	0.041 J	0.043 J	0.046 J	0.23
Thallium	14	190000	1.2	0.099 J	0.073 J	0.14	0.072 J	0.14	0.16	0.28	0.15	0.15	0.14	0.12
Vanadium	680	190000	580	12 B	11	12	19	27	27	22	17	21	22	19
Zinc	12000	190000	35000	8.7 B	7.9	38	19	23	24	91	33	58	73	330
Polychlorinated Biphenols														
Aroclor-1016	190	10000	5.1											
Aroclor-1221	0.68	27	0.83											
Aroclor-1232	0.54	10000	0.72											
Aroclor-1242	17	10000	0.95											
Aroclor-1248	67	10000	0.94											
Aroclor-1254	380	10000	0.97											
Aroclor-1260	630	190000	0.99											
Percent Solids														
Percent Solids														
pH														
pH														
Sulfide, Total														
Sulfide, Total														
Semi Volatile Organic Compound														
1,2,4-Trichlorobenzene	27	190	26	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
1,2-Dichlorobenzene	60	10000	930	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
1,3,5-Trinitrobenzene			3200											
1,3-Dichlorobenzene	61	10000		0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
1,3-Dinitrobenzene	0.1	190000	8.2											
1,4-Dichlorobenzene	10	230	11	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
1-Methylnaphthalene			73											
2,4,5-Trichlorophenol	5900	190000	8200	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
2,4,6-Trichlorophenol	28	190000	82	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
2,4,6-Trinitrotoluene	0.2	190000	51											
2,4-Dichlorophenol	2	190000	250	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.084 U
2,4-Dimethylphenol	190	10000	1600	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
2,4-Dinitrophenol	19	190000	160	1.9 U	1.9 U	2 U	2 U	2.1 U	2.1 U	2.2 U	2.1 U	2.2 U	2.1 U	2.1 U
2,4-Dinitrotoluene	0.88	190000	7.4	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
2,6-Dinitrotoluene	0.18	190000	1.5	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
2-Amino-4,6-Dinitrotoluene			11											
2-Chloronaphthalene	17000	190000	6000	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.084 U
2-Chlorophenol	4.4	10000	580	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
2-Methylnaphthalene	100	270	300	0.074 U	0.075 U	0.079 U	0.08 U	0.081 J	0.049 J	0.086 U	0.033 J	0.045 J	0.045 J	0.23
2-Methylphenol	490	190000	4100	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
2-Nitroaniline	0.044	4.5	800	1.9 U	1.9 U	2 U	2 U	2.1 U	2.1 U	2.2 U	2.1 U	2.2 U	2.1 U	2.1 U
2-Nitrophenol	78	190000		0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
2-Nitrotoluene			15											
3-& 4-Methylphenol [1]	49	190000	1600	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
3,3'-Dichlorobenzidine	33	190000	5.1	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
3-Nitroaniline				1.9 U	1.9 U	2 U	2 U	2.1 U	2.1 U	2.2 U	2.1 U	2.2 U	2.1 U	2.1 U
3-Nitrotoluene			8.2											
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6	1.9 U	1.9 U	2 U	2 U	2.1 U	2.1 U	2.2 U	2.1 U	2.2 U	2.1 U	2.1 U
4-Amino-2,6-Dinitrotoluene			11											
4-Bromophenyl phenyl ether				0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
4-Chloro-3-Methyl-Phenol	2000	190000	8200	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41RAA15-CS-002 3 - 4 10/13/11	B41RAA15-CS-003 9 - 10 10/17/11	B41RAA15-CS-004 9 - 10 10/17/11	B41RAA15-CS-005 5 - 6 10/17/11	B41RAA16-CS-005 4 - 5 9/28/11	B41RAA16-CS-006 4 - 5 9/28/11	B41RAA16-CS-007 4 - 5 9/28/11	B41RAA16-CS-009 4.5 - 5 9/28/11	B41RAA16-CS-010 4.5 - 5 9/28/11	B41RAA16-CS-010 4.5 - 5 9/28/11	B41RAA16-CS-013 6 - 7 10/19/11
4-Chloroaniline	1.8	190000	11	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
4-Chlorodiphenyl Ether				0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
4-Nitroaniline	14	190000	110	1.9 U	1.9 U	2 U	2 U	2.1 U	2.1 U	2.2 U	2.1 U	2.2 U	2.1 U	2.1 U
4-Nitrophenol	6	190000		1.9 U	1.9 U	2 U	2 U	2.1 U	2.1 U	2.2 U	2.1 U	2.2 U	2.1 U	2.1 U
4-Nitrotoluene			140											
Acenaphthene	4700	190000	4500	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.015 J
Acenaphthylene	6600	190000		0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.013 J
Anthracene	350	190000	23000	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.019 J
Benzo (A) Anthracene	340	190000	21	0.074 U	0.075 U	0.079 U	0.08 U	0.016 J	0.011 J	0.086 U	0.082 U	0.014 J	0.016 J	0.05 J
Benzo (a) Pyrene	46	190000	2.1	0.074 U	0.075 U	0.079 U	0.08 U	0.014 J	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.057 J
Benzo (b) Fluoranthene	170	190000	21	0.074 U	0.075 U	0.079 U	0.08 U	0.023 J	0.085 U	0.086 U	0.082 U	0.021 J	0.084 U	0.086
Benzo (g,h,i) Perylene	180	190000		0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.068 J
Benzo (k) Fluoranthene	610	190000	210	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.084 U
Bis(2-Chloroethoxy) Methane	29	10000	250	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
Bis(2-Chloroethyl) Ether	0.076	7.6	1	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.084 U
Bis(2-Chloroisopropyl) Ether	30	250	4700	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.084 U
Bis(2-Ethylhexyl) Phthalate	130	10000	160	0.74 U	0.75 U	0.79 U	0.8 U	0.83 U	0.85 U	0.86 U	0.076 J	0.85 U	0.84 U	0.26 J
Butylbenzylphthalate	10000	10000	1200	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
Carbazole	89	190000		0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.032 J	0.014 J
Chrysene	230	190000	2100	0.074 U	0.075 U	0.079 U	0.08 U	0.024 J	0.015 J	0.086 U	0.082 U	0.019 J	0.021 J	0.064 J
Dibenzo (a,h) Anthracene	270	190000	2.1	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.17
Dibenzofuran	250	190000	120	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.061 J
Diethylphthalate	7800	10000	66000	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
Dimethylphthalate				0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
Di-n-Butylphthalate	4000	10000	8200	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.066 J
Di-n-octylphthalate	10000	10000	820	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
Fluoranthene	3200	190000	3000	0.074 U	0.075 U	0.079 U	0.08 U	0.023 J	0.0094 J	0.017 J	0.022 J	0.024 J	0.027 J	0.063 J
Fluorene	3800	190000	3000	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.084 U
Hexachlorobenzene	0.96	190000	0.96	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.084 U
Hexachlorobutadiene	42	10000	5.3	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.084 U
Hexachlorocyclopentadiene	91	10000	0.75	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
Hexachloroethane	0.56	270	8	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	0.2	190000	38											
Indeno (1,2,3-cd) Pyrene	18000	190000	21	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.18
Isophorone	10	10000	2400	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
Methyl-2,4,6-Trinitrophenylnitramine			230											
Naphthalene	25	77	8.6	0.074 U	0.075 U	0.079 U	0.08 U	0.049 J	0.03 J	0.086 U	0.02 J	0.027 J	0.055 J	0.14
Nitrobenzene	0.63	63	22	0.74 U	0.75 U	0.79 U	0.8 U	0.83 U	0.85 U	0.86 U	0.82 U	0.85 U	0.84 U	0.84 U
Nitroglycerine	0.5	10000	8.2											
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.084 U
N-Nitrosodiphenylamine	15	990	470	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
Octahydro-Tetranitro-1,3,5,7-Tetrazocine	40	190000	5700											
Pentachlorophenol	5	190000	4	0.36 U	0.37 U	0.39 U	0.39 U	0.41 U	0.42 U	0.42 U	0.4 U	0.42 U	0.41 U	0.42 U
Pentaerythritol tetranitrate			530											
Phenanthrene	10000	190000		0.074 U	0.075 U	0.079 U	0.08 U	0.042 J	0.025 J	0.086 U	0.021 J	0.033 J	0.045 J	0.14
Phenol	200	18000	25000	0.074 U	0.075 U	0.079 U	0.08 U	0.083 U	0.085 U	0.086 U	0.082 U	0.085 U	0.084 U	0.084 U
Picric acid			160											
Pyrene	2200	190000	2300	0.074 U	0.075 U	0.079 U	0.08 U	0.022 J	0.013 J	0.014 J	0.021 J	0.022 J	0.039 J	0.084
Total Solids														
Percent Solids														
Petroleum Hydrocarbons														
N-Hexane Extractable Material														
Volatile Organic Compound														
1,1,1,2-Tetrachloroethane	18	340	8.8	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
1,1,1-Trichloroethane	20	10000	3600	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
1,1,2,2-Tetrachloroethane	0.43	44	2.7	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
1,1,2-Trichloroethane	0.5	18	0.63	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
1,1-Dichloroethane	16	1600	16	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0011 J	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
1,1-Dichloroethene	0.7	10000	100	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
1,2,4-Trimethylbenzene	300	5400	180											
1,2-Dibromoethane	0.005	4.2	0.16	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
1,2-Dichloroethane	0.5	98	2	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
1,2-Dichloropropane	0.5	0.69	6.6	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
1,3,5-Trimethylbenzene	93	5400	150											
1,4-Dioxane	2.7	510	24	0.98 U	1 U	1.1 U	1.1 U	1 U	1.1 U	58 U	250 U	180 U	540 U	1.2 U
2-Butanone	400	10000	19000	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
2-Hexanone	26	2700	130	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41RAA15-CS-002 3 - 4 10/13/11	B41RAA15-CS-003 9 - 10 10/17/11	B41RAA15-CS-004 9 - 10 10/17/11	B41RAA15-CS-005 5 - 6 10/17/11	B41RAA16-CS-005 4 - 5 9/28/11	B41RAA16-CS-006 4 - 5 9/28/11	B41RAA16-CS-007 4 - 5 9/28/11	B41RAA16-CS-009 4.5 - 5 9/28/11	B41RAA16-CS-010 4.5 - 5 9/28/11	B41RAA16-CS-010 4.5 - 5 9/28/11	B41RAA16-CS-013 6 - 7 10/19/11
4-Methyl-2-Pentanone	780	10000	14000	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Acetone	8800	10000	110000	0.02 U	0.021 U	0.022 U	0.009 J	0.02 U	0.022 U	1.2 U	5 U	3.7 U	11 U	0.024 U
Acrylonitrile	0.37	37	1.1	0.098 U	0.1 U	0.11 U	0.11 U	0.1 U	0.11 U	5.8 U	25 U	18 U	54 U	0.12 U
Benzene	0.5	330	5.1	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Bromochloromethane	9	3600	63	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Bromodichloromethane	8	69	1.3	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Bromoform	8	2300	86	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Bromomethane	1	460	3	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Carbon Disulfide	620	10000	350	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Carbon Tetrachloride	0.5	430	2.9	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Chlorobenzene	10	4500	130	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Chlorodibromomethane	8	10000	39	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Chloroethane	8800	10000	2300	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Chloroform	8	110	1.4	0.00065 J	0.0052 U	0.00069 J	0.00068 J	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Chloromethane	3	1400	46	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
cis-1,2-Dichloroethene	7	10000	230	0.0011 J	0.024	0.0084	0.0057 U	0.0011 J	0.0054 U	4.1	24	18	63	0.016
cis-1,3-Dichloropropene	2.7	640	8.2	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Ethylbenzene	70	1000	25	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Isopropylbenzene	2500	10000	990											
Methyl tert-butyl ether	2	9800	210	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Methylene chloride	0.5	10000	320	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	0.65 J	0.92 U	2.7 U	0.0061 U
Naphthalene	25	77	8.6											
Styrene	24	10000	3500	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Tetrachloroethene	0.5	3600	39	0.0011 J	0.034	0.022	0.0011 J	0.0051 U	0.0054 U	1.3	0.23 J	0.58 J	2.7 U	0.0057 J
Toluene	100	10000	4700	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
trans-1,2-Dichloroethene	10	10000	30	0.0049 U	0.00075 J	0.0054 U	0.0057 U	0.0017 J	0.0054 U	0.46	3.5	0.92 U	7.9	0.0028 J
trans-1,3-Dichloropropene [2]	2.7	640	8.2	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	0.29 U	1.2 U	0.92 U	2.7 U	0.0061 U
Trichloroethene	0.5	180	1.9	0.0024 J	0.046	0.022	0.00099 J	0.00088 J	0.0054 U	1.2	4.6	6.6	2.1 J	0.014
Vinyl Chloride	0.2	290	1.7	0.0049 U	0.0052 U	0.0054 U	0.0057 U	0.0051 U	0.0054 U	1.3	0.33 J	0.76 J	1.5 J	0.0061 U
Xylenes (Total)	1000	9100	250	0.015 U	0.016 U	0.016 U	0.017 U	0.015 U	0.016 U	0.87 U	3.7 U	2.7 U	8.1 U	0.018 U

Notes:

Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41RAA2-CS-001 9 - 10 10/17/11	B41RAA4-CS-001 9 - 10 10/17/11	IWTP030-CS-001 2 - 3 10/13/11	IWTP030-CS-002 2 - 3 10/13/11	IWTP030-CS-003 2 - 3 10/13/11	IWTP030-CS-004 2 - 3 10/13/11	IWTP032-CS-001 6 - 7 10/13/11	IWTP032-CS-002 6 - 7 10/13/11	IWTP032-CS-003 9 - 10 10/13/11	IWTP032-CS-004 6 - 7 10/13/11	IWTP033-CS-001 13 - 14 10/11/11	IWTP033-CS-002 13 - 14 10/11/11
Cyanide, Free															
Cyanide, Free	200	190000	15	0.046 U	0.046 U	0.046 U	0.048 U	0.049 U	0.049 U	0.05 U	0.051 U	0.045 U	0.047 U	0.044 U	0.054 U
Cyanide, Total															
Cyanide, Total	200	190000	15	0.59 U	0.55 U	0.25 J	0.52 J	3.5	3.4	0.21 J	0.24 J	0.1 J	3	0.76	1.9
METAL															
Antimony	27	190000	47	0.066 J B	0.11 J B	0.11 J	0.085 J	0.11 J	0.1 J	0.068 J	0.067 J	0.034 J	0.061 J	0.058 J B	0.64 B
Arsenic	29	190000	3	1.1	5.2	9.1	4	7.2	5.5	3.3	3.1	1.8	3.5	1.3	5.7
Barium	8200	190000	22000	29	66	85 B	77 B	84 B	50 B	72 B	64 B	36 B	60 B	27 B	47 B
Beryllium	320	190000	230	0.12	0.29	0.73	0.68	0.96	0.44	0.7	0.7	0.26	0.44	0.31	1.6
Cadmium	38	190000	10	0.025 J	3.8	0.6	0.61	6.1	7.6	0.18	0.23	0.094 J	0.15	14 B	25 B
Chromium	190	140000	6.3	5.1 B	75 B	16 B	18 B	39 B	150 B	24 B	23 B	9.5 B	15 B	49 B	290 B
Copper	43000	190000	4700	3.8	13	11 B	11 B	14 B	12 B	11 B	14 B	5.4 B	7 B	10 B	39 B
Hexavalent Chromium	190	140000	6.3	2	2.5	1.1	1.3	1.2	12	1.5	1.5	0.77	1.3	2.2	0.29 J
Lead	450	190000	800	3.9 B	10 B	8.7 B	11 B	15 B	8.7 B	12 B	12 B	6 B	11 B	14	35
Mercury	10	190000	4.6	0.03 J	0.025 J	0.017 J	0.065	0.083	0.056	0.068	0.045	0.03 J	0.045	0.018 J	0.047
Nickel	650	190000	2200	3.6	49	6.7	9.3	56	130	9.8	9.2	5.9	6.1	41	120
Selenium	26	190000	580	0.11 J	0.76	0.57	0.42 J	0.83	0.26 J	0.4 J	0.43 J	0.13 J	0.17 J	0.33 J	1.1
Silver	84	190000	580	0.016 J	0.04 J	0.023 J	0.034 J	0.068 J	0.059 J	0.038 J	0.036 J	0.015 J	0.022 J	0.038 J	0.11 J
Thallium	14	190000	1.2	0.037 J	0.06 J	0.17	0.17	0.15	0.081 J	0.12	0.12 J	0.084 J	0.088 J	0.065 J	0.15
Vanadium	680	190000	580	7.5	31	22 B	24 B	26 B	19 B	28 B	33 B	12 B	23 B	5.6 B	65 B
Zinc	12000	190000	35000	8.9	38	24 B	30 B	100 B	43 B	22 B	22 B	11 B	11 B	34 B	67 B
Polychlorinated Biphenols															
Aroclor-1016	190	10000	5.1												
Aroclor-1221	0.68	27	0.83												
Aroclor-1232	0.54	10000	0.72												
Aroclor-1242	17	10000	0.95												
Aroclor-1248	67	10000	0.94												
Aroclor-1254	380	10000	0.97												
Aroclor-1260	630	190000	0.99												
Percent Solids															
Percent Solids															
pH															
pH															
Sulfide, Total															
Sulfide, Total															
Semi Volatile Organic Compound															
1,2,4-Trichlorobenzene	27	190	26	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.066 J
1,2-Dichlorobenzene	60	10000	930	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.25 J
1,3,5-Trinitrobenzene			3200												
1,3-Dichlorobenzene	61	10000		0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
1,3-Dinitrobenzene	0.1	190000	8.2												
1,4-Dichlorobenzene	10	230	11	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.061 J
1-Methylnaphthalene			73												
2,4,5-Trichlorophenol	5900	190000	8200	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
2,4,6-Trichlorophenol	28	190000	82	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
2,4,6-Trinitrotoluene	0.2	190000	51												
2,4-Dichlorophenol	2	190000	250	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
2,4-Dimethylphenol	190	10000	1600	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
2,4-Dinitrophenol	19	190000	160	1.9 U	1.9 U	1.9 U	2 U	2.1 U	2.1 U	2.1 U	2.2 U	1.9 U	2 U	1.9 U	2.3 U
2,4-Dinitrotoluene	0.88	190000	7.4	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
2,6-Dinitrotoluene	0.18	190000	1.5	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
2-Amino-4,6-Dinitrotoluene			11												
2-Chloronaphthalene	17000	190000	6000	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
2-Chlorophenol	4.4	10000	580	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
2-Methylnaphthalene	100	270	300	0.076 U	0.076 U	0.12	0.009 J	0.0095 J	0.026 J	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.07 J
2-Methylphenol	490	190000	4100	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
2-Nitroaniline	0.044	4.5	800	1.9 U	1.9 U	1.9 U	2 U	2.1 U	2.1 U	2.1 U	2.2 U	1.9 U	2 U	1.9 U	2.3 U
2-Nitrophenol	78	190000		0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
2-Nitrotoluene			15												
3-& 4-Methylphenol [1]	49	190000	1600	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
3,3'-Dichlorobenzidine	33	190000	5.1	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
3-Nitroaniline				1.9 U	1.9 U	1.9 U	2 U	2.1 U	2.1 U	2.1 U	2.2 U	1.9 U	2 U	1.9 U	2.3 U
3-Nitrotoluene			8.2												
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6	1.9 U	1.9 U	1.9 U	2 U	2.1 U	2.1 U	2.1 U	2.2 U	1.9 U	2 U	1.9 U	2.3 U
4-Amino-2,6-Dinitrotoluene			11												
4-Bromophenyl phenyl ether				0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
4-Chloro-3-Methyl-Phenol	2000	190000	8200	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41RAA2-CS-001 9 - 10 10/17/11	B41RAA4-CS-001 9 - 10 10/17/11	IWTP030-CS-001 2 - 3 10/13/11	IWTP030-CS-002 2 - 3 10/13/11	IWTP030-CS-003 2 - 3 10/13/11	IWTP030-CS-004 2 - 3 10/13/11	IWTP032-CS-001 6 - 7 10/13/11	IWTP032-CS-002 6 - 7 10/13/11	IWTP032-CS-003 9 - 10 10/13/11	IWTP032-CS-004 6 - 7 10/13/11	IWTP033-CS-001 13 - 14 10/11/11	IWTP033-CS-002 13 - 14 10/11/11
4-Chloroaniline	1.8	190000	11	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
4-Chlorodiphenyl Ether				0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
4-Nitroaniline	14	190000	110	1.9 U	1.9 U	1.9 U	2 U	2.1 U	2.1 U	2.1 U	2.2 U	1.9 U	2 U	1.9 U	2.3 U
4-Nitrophenol	6	190000		1.9 U	1.9 U	1.9 U	2 U	2.1 U	2.1 U	2.1 U	2.2 U	1.9 U	2 U	1.9 U	2.3 U
4-Nitrotoluene			140												
Acenaphthene	4700	190000	4500	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.021 J
Acenaphthylene	6600	190000		0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Anthracene	350	190000	23000	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Benzo (A) Anthracene	340	190000	21	0.076 U	0.076 U	0.017 J	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Benzo (a) Pyrene	46	190000	2.1	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Benzo (b) Fluoranthene	170	190000	21	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Benzo (g,h,i) Perylene	180	190000		0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Benzo (k) Fluoranthene	610	190000	210	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Bis(2-Chloroethoxy) Methane	29	10000	250	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Bis(2-Chloroethyl) Ether	0.076	7.6	1	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Bis(2-Chloroisopropyl) Ether	30	250	4700	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Bis(2-Ethylhexyl) Phthalate	130	10000	160	0.76 U	0.76 U	0.77 U	0.79 U	0.82 U	0.81 U	0.83 U	0.85 U	0.74 U	0.78 U	0.46 J	1.3
Butylbenzylphthalate	10000	10000	1200	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Carbazole	89	190000		0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Chrysene	230	190000	2100	0.076 U	0.076 U	0.019 J	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Dibenzo (a,h) Anthracene	270	190000	2.1	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Dibenzofuran	250	190000	120	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Diethylphthalate	7800	10000	66000	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.066 J	0.058 J	0.37 U	0.38 U	0.36 U	0.44 U
Dimethylphthalate				0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Di-n-Butylphthalate	4000	10000	8200	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Di-n-octylphthalate	10000	10000	820	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Fluoranthene	3200	190000	3000	0.076 U	0.076 U	0.0098 J	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.013 J	0.045 J
Fluorene	3800	190000	3000	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.029 J
Hexachlorobenzene	0.96	190000	0.96	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Hexachlorobutadiene	42	10000	5.3	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Hexachlorocyclopentadiene	91	10000	0.75	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Hexachloroethane	0.56	270	8	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	0.2	190000	38												
Indeno (1,2,3-cd) Pyrene	18000	190000	21	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Isophorone	10	10000	2400	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Methyl-2,4,6-Trinitrophenylnitramine			230												
Naphthalene	25	77	8.6	0.076 U	0.076 U	0.086	0.079 U	0.082 U	0.021 J	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.058 J
Nitrobenzene	0.63	63	22	0.76 U	0.76 U	0.77 U	0.79 U	0.82 U	0.81 U	0.83 U	0.85 U	0.74 U	0.78 U	0.74 U	0.9 U
Nitroglycerine	0.5	10000	8.2												
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
N-Nitrosodiphenylamine	15	990	470	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Octahydro-Tetranitro-1,3,5,7-Tetrazocine	40	190000	5700												
Pentachlorophenol	5	190000	4	0.38 U	0.38 U	0.38 U	0.39 U	0.4 U	0.4 U	0.41 U	0.42 U	0.37 U	0.38 U	0.36 U	0.44 U
Pentaerythritol tetranitrate			530												
Phenanthrene	10000	190000		0.076 U	0.076 U	0.071 J	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.04 J
Phenol	200	18000	25000	0.076 U	0.076 U	0.077 U	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.074 U	0.09 U
Picric acid			160												
Pyrene	2200	190000	2300	0.076 U	0.076 U	0.018 J	0.079 U	0.082 U	0.081 U	0.083 U	0.085 U	0.074 U	0.078 U	0.018 J	0.042 J
Total Solids															
Percent Solids															
Petroleum Hydrocarbons															
N-Hexane Extractable Material															
Volatile Organic Compound															
1,1,1,2-Tetrachloroethane	18	340	8.8	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
1,1,1-Trichloroethane	20	10000	3600	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
1,1,2,2-Tetrachloroethane	0.43	44	2.7	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
1,1,2-Trichloroethane	0.5	18	0.63	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
1,1-Dichloroethane	16	1600	16	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
1,1-Dichloroethene	0.7	10000	100	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0015 J
1,2,4-Trimethylbenzene	300	5400	180												
1,2-Dibromoethane	0.005	4.2	0.16	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
1,2-Dichloroethane	0.5	98	2	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
1,2-Dichloropropane	0.5	0.69	6.6	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
1,3,5-Trimethylbenzene	93	5400	150												
1,4-Dioxane	2.7	510	24	1.3 U	1.3 U	1 U	0.97 U	0.99 U	1.1 U	1 U	1.2 U	0.99 U	1 U	0.95 U	1.2 U
2-Butanone	400	10000	19000	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
2-Hexanone	26	2700	130	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41RAA2-CS-001 9 - 10 10/17/11	B41RAA4-CS-001 9 - 10 10/17/11	IWTP030-CS-001 2 - 3 10/13/11	IWTP030-CS-002 2 - 3 10/13/11	IWTP030-CS-003 2 - 3 10/13/11	IWTP030-CS-004 2 - 3 10/13/11	IWTP032-CS-001 6 - 7 10/13/11	IWTP032-CS-002 6 - 7 10/13/11	IWTP032-CS-003 9 - 10 10/13/11	IWTP032-CS-004 6 - 7 10/13/11	IWTP033-CS-001 13 - 14 10/11/11	IWTP033-CS-002 13 - 14 10/11/11
4-Methyl-2-Pentanone	780	10000	14000	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Acetone	8800	10000	110000	0.013 J	0.011 J	0.02 U	0.019 U	0.02 U	0.023 U	0.021 U	0.023 U	0.02 U	0.021 U	0.019 U	0.025 U
Acrylonitrile	0.37	37	1.1	0.13 U	0.13 U	0.1 U	0.097 U	0.099 U	0.11 U	0.1 U	0.12 U	0.099 U	0.1 U	0.095 U	0.12 U
Benzene	0.5	330	5.1	0.0066 U	0.0064 U	0.00068 J	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Bromochloromethane	9	3600	63	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Bromodichloromethane	8	69	1.3	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Bromoform	8	2300	86	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Bromomethane	1	460	3	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Carbon Disulfide	620	10000	350	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Carbon Tetrachloride	0.5	430	2.9	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Chlorobenzene	10	4500	130	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Chlorodibromomethane	8	10000	39	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Chloroethane	8800	10000	2300	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Chloroform	8	110	1.4	0.0066 U	0.0064 U	0.0011 J	0.0007 J	0.00081 J	0.00067 J	0.00073 J	0.00069 J	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Chloromethane	3	1400	46	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
cis-1,2-Dichloroethene	7	10000	230	0.005 J	0.0025 J	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.029	0.016	0.013	0.013	0.15	0.16
cis-1,3-Dichloropropene	2.7	640	8.2	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Ethylbenzene	70	1000	25	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.002 J	0.0037 J
Isopropylbenzene	2500	10000	990												
Methyl tert-butyl ether	2	9800	210	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Methylene chloride	0.5	10000	320	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0012 J	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Naphthalene	25	77	8.6												
Styrene	24	10000	3500	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Tetrachloroethene	0.5	3600	39	0.0066 U	0.0064 U	0.00076 J	0.0013 J	0.0011 J	0.0056 U	0.026	0.016	0.015	0.023	0.099	0.075
Toluene	100	10000	4700	0.0066 U	0.0064 U	0.00078 J	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0009 J	0.00097 J
trans-1,2-Dichloroethene	10	10000	30	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0025 J	0.0063
trans-1,3-Dichloropropene [2]	2.7	640	8.2	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0052 U	0.0059 U	0.0049 U	0.0052 U	0.0048 U	0.0061 U
Trichloroethene	0.5	180	1.9	0.001 J	0.0064 U	0.00073 J	0.00073 J	0.0049 U	0.0011 J	0.029	0.016	0.021	0.033	0.015	0.051
Vinyl Chloride	0.2	290	1.7	0.0066 U	0.0064 U	0.0051 U	0.0049 U	0.0049 U	0.0056 U	0.0018 J	0.0059 U	0.0049 U	0.0052 U	0.052	0.023
Xylenes (Total)	1000	9100	250	0.02 U	0.019 U	0.015 U	0.015 U	0.015 U	0.017 U	0.016 U	0.018 U	0.015 U	0.015 U	0.014 U	0.018 U

Notes:

Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	IWTP034-CS-001 9.5 - 10.5 10/11/11	IWTP034-CS-002 9.5 - 10.5 10/11/11	IWTP035-CS-001 9 - 10 10/11/11	IWTP035-CS-002 9 - 10 10/11/11	IWTP035-CS-003 9 - 10 10/11/11	IWTP035-CS-004 9 - 10 10/11/11	IWTP038-CS-001 6 - 7 10/11/11	IWTP038-CS-002 6 - 7 10/11/11	IWTP038-CS-003 6 - 7 10/11/11	IWTP038-CS-004 6 - 7 10/11/11	IWTP038-CS-005 6 - 7 10/11/11	IWTP039-CS-001 3 - 4 10/11/11
Cyanide, Free															
Cyanide, Free	200	190000	15	0.05 U	0.047 U	0.049 U	0.045 U	0.047 U	0.046 U	0.046 U	0.045 U	0.049 U	0.047 U	0.046 U	0.045 U
Cyanide, Total															
Cyanide, Total	200	190000	15	0.56 J	0.59 U	0.61 U	0.56 U	0.59 U	0.58 U	0.58 U	0.56 U	0.61 U	0.58 U	0.44 J	0.57 U
METAL															
Antimony	27	190000	47	0.081 J B	0.025 J B	0.051 J B	0.034 J B	0.23 U	0.021 J B	0.14 J B	0.035 J B	0.054 J B	0.05 J B	0.042 J B	0.0031 J B
Arsenic	29	190000	3	5.3	1.1	3.4	2.9	1.8	2.1	2.3	2.8	4	5.1	7.7	1.9
Barium	8200	190000	22000	48 B	32 B	49 B	42 B	20 B	50 B	73 B	40 B	75 B	81 B	55 B	81 B
Beryllium	320	190000	230	0.42	0.2	0.53	0.58	0.23	0.45	0.33	0.24	0.43	0.62	0.54	0.68
Cadmium	38	190000	10	9.3 B	0.32 B	1.2 B	0.24 B	0.14 B	0.17 B	0.12 B	0.11 B	0.21 B	0.14 B	0.3 B	0.13 B
Chromium	190	140000	6.3	42 B	9 B	20 B	22 B	9.9 B	16 B	12 B	10 B	19 B	12 B	13 B	10 B
Copper	43000	190000	4700	11 B	6.3 B	11 B	8.4 B	5.2 B	6.8 B	9.1 B	6.4 B	9.3 B	11 B	11 B	4.5 B
Hexavalent Chromium	190	140000	6.3	0.5 U	0.49	0.51	0.35 J	0.19 J	0.18 J	0.61	0.29 J	0.39 J	1	0.79	0.3 J
Lead	450	190000	800	9.1	6.2	9.1	9.7	4.1	7.2	9.3	6.7	11	9.9	6.8	8.3
Mercury	10	190000	4.6	0.014 J	0.028 J	0.024 J	0.022 J	0.039	0.023 J	0.18	0.013 J	0.047	0.025 J	0.015 J	0.012 J
Nickel	650	190000	2200	23	5.8	17	6.9	4.6	6.1	8.1	6.8	8.6	6.6	7	5.2
Selenium	26	190000	580	0.51 J	0.14 J	0.47 J	0.31 J	0.21 J	0.34 J	0.31 J	0.23 J	0.5 J	0.22 J	0.15 J	0.56
Silver	84	190000	580	0.037 J	0.018 J	0.043 J	0.024 J	0.017 J	0.032 J	0.028 J	0.016 J	0.03 J	0.02 J	0.023 J	0.026 J
Thallium	14	190000	1.2	0.075 J	0.045 J	0.077 J	0.081 J	0.04 J	0.069 J	0.1 J	0.08 J	0.12	0.15	0.077 J	0.14
Vanadium	680	190000	580	19 B	9.6 B	20 B	25 B	9.1 B	15 B	22 B	13 B	26 B	20 B	9.7 B	16 B
Zinc	12000	190000	35000	34 B	11 B	24 B	18 B	8.7 B	14 B	18 B	14 B	22 B	16 B	8.8 B	17 B
Polychlorinated Biphenols															
Aroclor-1016	190	10000	5.1												
Aroclor-1221	0.68	27	0.83												
Aroclor-1232	0.54	10000	0.72												
Aroclor-1242	17	10000	0.95												
Aroclor-1248	67	10000	0.94												
Aroclor-1254	380	10000	0.97												
Aroclor-1260	630	190000	0.99												
Percent Solids															
Percent Solids															
pH															
pH															
Sulfide, Total															
Sulfide, Total															
Semi Volatile Organic Compound															
1,2,4-Trichlorobenzene	27	190	26	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
1,2-Dichlorobenzene	60	10000	930	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
1,3,5-Trinitrobenzene			3200												
1,3-Dichlorobenzene	61	10000		0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
1,3-Dinitrobenzene	0.1	190000	8.2												
1,4-Dichlorobenzene	10	230	11	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
1-Methylnaphthalene			73												
2,4,5-Trichlorophenol	5900	190000	8200	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
2,4,6-Trichlorophenol	28	190000	82	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
2,4,6-Trinitrotoluene	0.2	190000	51												
2,4-Dichlorophenol	2	190000	250	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
2,4-Dimethylphenol	190	10000	1600	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
2,4-Dinitrophenol	19	190000	160	2.1 U	2 U	2 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2.1 U	2 U	1.9 U	1.9 U
2,4-Dinitrotoluene	0.88	190000	7.4	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
2,6-Dinitrotoluene	0.18	190000	1.5	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
2-Amino-4,6-Dinitrotoluene			11												
2-Chloronaphthalene	17000	190000	6000	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
2-Chlorophenol	4.4	10000	580	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
2-Methylnaphthalene	100	270	300	0.0098 J	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
2-Methylphenol	490	190000	4100	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
2-Nitroaniline	0.044	4.5	800	2.1 U	2 U	2 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2.1 U	2 U	1.9 U	1.9 U
2-Nitrophenol	78	190000		0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
2-Nitrotoluene			15												
3-& 4-Methylphenol [1]	49	190000	1600	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
3,3'-Dichlorobenzidine	33	190000	5.1	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
3-Nitroaniline				2.1 U	2 U	2 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2.1 U	2 U	1.9 U	1.9 U
3-Nitrotoluene			8.2												
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6	2.1 U	2 U	2 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2.1 U	2 U	1.9 U	1.9 U
4-Amino-2,6-Dinitrotoluene			11												
4-Bromophenyl phenyl ether				0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
4-Chloro-3-Methyl-Phenol	2000	190000	8200	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	IWTP034-CS-001 9.5 - 10.5 10/11/11	IWTP034-CS-002 9.5 - 10.5 10/11/11	IWTP035-CS-001 9 - 10 10/11/11	IWTP035-CS-002 9 - 10 10/11/11	IWTP035-CS-003 9 - 10 10/11/11	IWTP035-CS-004 9 - 10 10/11/11	IWTP038-CS-001 6 - 7 10/11/11	IWTP038-CS-002 6 - 7 10/11/11	IWTP038-CS-003 6 - 7 10/11/11	IWTP038-CS-004 6 - 7 10/11/11	IWTP038-CS-005 6 - 7 10/11/11	IWTP039-CS-001 3 - 4 10/11/11
4-Chloroaniline	1.8	190000	11	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
4-Chlorodiphenyl Ether				0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
4-Nitroaniline	14	190000	110	2.1 U	2 U	2 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2.1 U	2 U	1.9 U	1.9 U
4-Nitrophenol	6	190000		2.1 U	2 U	2 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	2.1 U	2 U	1.9 U	1.9 U
4-Nitrotoluene			140												
Acenaphthene	4700	190000	4500	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Acenaphthylene	6600	190000		0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Anthracene	350	190000	23000	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Benzo (A) Anthracene	340	190000	21	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Benzo (a) Pyrene	46	190000	2.1	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Benzo (b) Fluoranthene	170	190000	21	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Benzo (g,h,i) Perylene	180	190000		0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Benzo (k) Fluoranthene	610	190000	210	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Bis(2-Chloroethoxy) Methane	29	10000	250	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Bis(2-Chloroethyl) Ether	0.076	7.6	1	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Bis(2-Chloroisopropyl) Ether	30	250	4700	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Bis(2-Ethylhexyl) Phthalate	130	10000	160	0.19 J	0.78 U	0.8 U	0.74 U	0.78 U	0.76 U	0.77 U	0.74 U	0.81 U	0.77 U	0.76 U	0.76 U
Butylbenzylphthalate	10000	10000	1200	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Carbazole	89	190000		0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Chrysene	230	190000	2100	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Dibenzo (a,h) Anthracene	270	190000	2.1	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Dibenzofuran	250	190000	120	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Diethylphthalate	7800	10000	66000	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Dimethylphthalate				0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Di-n-Butylphthalate	4000	10000	8200	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Di-n-octylphthalate	10000	10000	820	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Fluoranthene	3200	190000	3000	0.025 J	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Fluorene	3800	190000	3000	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Hexachlorobenzene	0.96	190000	0.96	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Hexachlorobutadiene	42	10000	5.3	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Hexachlorocyclopentadiene	91	10000	0.75	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Hexachloroethane	0.56	270	8	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	0.2	190000	38												
Indeno (1,2,3-cd) Pyrene	18000	190000	21	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Isophorone	10	10000	2400	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Methyl-2,4,6-Trinitrophenylnitramine			230												
Naphthalene	25	77	8.6	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Nitrobenzene	0.63	63	22	0.84 U	0.78 U	0.8 U	0.74 U	0.78 U	0.76 U	0.77 U	0.74 U	0.81 U	0.77 U	0.76 U	0.76 U
Nitroglycerine	0.5	10000	8.2												
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
N-Nitrosodiphenylamine	15	990	470	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Octahydro-Tetranitro-1,3,5,7-Tetrazocine	40	190000	5700												
Pentachlorophenol	5	190000	4	0.41 U	0.38 U	0.39 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.4 U	0.38 U	0.37 U	0.37 U
Pentaerythritol tetranitrate			530												
Phenanthrene	10000	190000		0.014 J	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Phenol	200	18000	25000	0.084 U	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Picric acid			160												
Pyrene	2200	190000	2300	0.023 J	0.078 U	0.08 U	0.074 U	0.078 U	0.076 U	0.077 U	0.074 U	0.081 U	0.077 U	0.076 U	0.076 U
Total Solids															
Percent Solids															
Petroleum Hydrocarbons															
N-Hexane Extractable Material															
Volatile Organic Compound															
1,1,1,2-Tetrachloroethane	18	340	8.8	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
1,1,1-Trichloroethane	20	10000	3600	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
1,1,2,2-Tetrachloroethane	0.43	44	2.7	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
1,1,2-Trichloroethane	0.5	18	0.63	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
1,1-Dichloroethane	16	1600	16	0.0054 U	0.0056 U	0.0023 J	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
1,1-Dichloroethene	0.7	10000	100	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
1,2,4-Trimethylbenzene	300	5400	180												
1,2-Dibromoethane	0.005	4.2	0.16	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
1,2-Dichloroethane	0.5	98	2	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
1,2-Dichloropropane	0.5	0.69	6.6	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
1,3,5-Trimethylbenzene	93	5400	150												
1,4-Dioxane	2.7	510	24	1.1 U	1.1 U	1 U	0.98 U	1.1 U	1 U	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Butanone	400	10000	19000	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0057	0.0057 U	0.0054 U
2-Hexanone	26	2700	130	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	IWTP034-CS-001 9.5 - 10.5 10/11/11	IWTP034-CS-002 9.5 - 10.5 10/11/11	IWTP035-CS-001 9 - 10 10/11/11	IWTP035-CS-002 9 - 10 10/11/11	IWTP035-CS-003 9 - 10 10/11/11	IWTP035-CS-004 9 - 10 10/11/11	IWTP038-CS-001 6 - 7 10/11/11	IWTP038-CS-002 6 - 7 10/11/11	IWTP038-CS-003 6 - 7 10/11/11	IWTP038-CS-004 6 - 7 10/11/11	IWTP038-CS-005 6 - 7 10/11/11	IWTP039-CS-001 3 - 4 10/11/11
4-Methyl-2-Pentanone	780	10000	14000	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Acetone	8800	10000	110000	0.012 J	0.022 U	0.012 J	0.02 U	0.022 U	0.021 U	0.022 U	0.02 U	0.022 U	0.021 U	0.023 U	0.021 U
Acrylonitrile	0.37	37	1.1	0.11 U	0.11 U	0.1 U	0.098 U	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U
Benzene	0.5	330	5.1	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Bromochloromethane	9	3600	63	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Bromodichloromethane	8	69	1.3	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Bromoform	8	2300	86	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Bromomethane	1	460	3	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Carbon Disulfide	620	10000	350	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Carbon Tetrachloride	0.5	430	2.9	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Chlorobenzene	10	4500	130	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Chlorodibromomethane	8	10000	39	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Chloroethane	8800	10000	2300	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Chloroform	8	110	1.4	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.00073 J	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Chloromethane	3	1400	46	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
cis-1,2-Dichloroethene	7	10000	230	0.025	0.024	0.00094 J	0.0049 U	0.0024 J	0.0052 U	0.0055 U	0.005 U	0.0033 J	0.0066	0.12	0.0054 U
cis-1,3-Dichloropropene	2.7	640	8.2	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Ethylbenzene	70	1000	25	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Isopropylbenzene	2500	10000	990												
Methyl tert-butyl ether	2	9800	210	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Methylene chloride	0.5	10000	320	0.0054 U	0.0056 U	0.00089 J	0.0049 U	0.0055 U	0.00098 J	0.0055 U	0.00092 J	0.00087 J	0.00086 J	0.0057 U	0.00073 J
Naphthalene	25	77	8.6												
Styrene	24	10000	3500	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Tetrachloroethene	0.5	3600	39	0.0019 J	0.0042 J	0.0052 U	0.0049 U	0.0019 J	0.0052 U	0.0017 J	0.005 U	0.0056 U	0.0053 U	0.0014 J	0.0054 U
Toluene	100	10000	4700	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
trans-1,2-Dichloroethene	10	10000	30	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.00096 J	0.0054 U
trans-1,3-Dichloropropene [2]	2.7	640	8.2	0.0054 U	0.0056 U	0.0052 U	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Trichloroethene	0.5	180	1.9	0.0023 J	0.00074 J	0.0052 U	0.0049 U	0.0019 J	0.0052 U	0.00075 J	0.005 U	0.0056 U	0.0053 U	0.0057 U	0.0054 U
Vinyl Chloride	0.2	290	1.7	0.0054 U	0.0022 J	0.0046 J	0.0049 U	0.0055 U	0.0052 U	0.0055 U	0.005 U	0.0056 U	0.0053 U	0.005 J	0.0054 U
Xylenes (Total)	1000	9100	250	0.016 U	0.017 U	0.016 U	0.015 U	0.016 U	0.016 U	0.017 U	0.015 U	0.017 U	0.016 U	0.017 U	0.016 U

Notes:

Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	IWTP039-CS-001 3 - 4 10/11/11	IWTP039-CS-002 3 - 4 10/11/11	IWTP039-CS-003 3 - 4 10/13/11	IWTP039-CS-004 3 - 4 10/13/11	IWTP039-CS-005 3 - 4 10/13/11	IWTP039-CS-006 3 - 4 10/13/11	SPBA-SB-006 0 - 1 3/27/17	SPBA-SB-006 10 - 10.5 3/27/17	SPBA-SB-006 5 - 5.5 3/27/17	SPBA-SB-007 0.5 - 1 3/28/17	SPBA-SB-007 10 - 10.5 3/28/17	SPBA-SB-007 5 - 5.5 3/28/17	SPBA-SB-008 0.5 - 1 3/29/17
Cyanide, Free																
Cyanide, Free	200	190000	15	0.047 U	0.048 U	0.047 U	0.046 U	0.045 U	0.046 U							
Cyanide, Total																
Cyanide, Total	200	190000	15	0.59 U	0.6 U	0.19 J	0.11 J	0.57 U	0.56 U							
METAL																
Antimony	27	190000	47	0.012 J B	0.009 J B	0.016 J	0.19 J	0.064 J	0.022 J							
Arsenic	29	190000	3	8.4	2.2	5	5.8	3.5	2							
Barium	8200	190000	22000	80 B	88 B	76 B	73 B	64 B	84 B							
Beryllium	320	190000	230	0.72	0.6	0.28	0.21	0.31	0.52							
Cadmium	38	190000	10	0.11 B	0.12 B	0.74	0.076 J	0.24	0.24							
Chromium	190	140000	6.3	11 B	12 B	9.7 B	8.4 B	10 B	8.4 B							
Copper	43000	190000	4700	8.6 B	4.7 B	3.8 B	4.7 B	5.1 B	2.4 B							
Hexavalent Chromium	190	140000	6.3	0.43 J	0.5	0.68	1.2	0.3 J	0.18 J							
Lead	450	190000	800	9.8	9.5	7.7 B	7.7 B	10 B	7.8 B							
Mercury	10	190000	4.6	0.012 J	0.038 U	0.038 U	0.037 U	0.013 J	0.037 U							
Nickel	650	190000	2200	4.6	4.9	3.5	2.8	3.2	4							
Selenium	26	190000	580	1.1	0.73	0.28 J	0.3 J	0.26 J	0.45 J							
Silver	84	190000	580	0.026 J	0.024 J	0.028 J	0.023 J	0.055 J	0.026 J							
Thallium	14	190000	1.2	0.14	0.15	0.083 J	0.093 J	0.079 J	0.088 J							
Vanadium	680	190000	580	18 B	17 B	11 B	11 B	9.2 B	12 B							
Zinc	12000	190000	35000	18 B	17 B	12 B	9.6 B	20 B	10 B							
Polychlorinated Biphenols																
Aroclor-1016	190	10000	5.1													
Aroclor-1221	0.68	27	0.83													
Aroclor-1232	0.54	10000	0.72													
Aroclor-1242	17	10000	0.95													
Aroclor-1248	67	10000	0.94													
Aroclor-1254	380	10000	0.97													
Aroclor-1260	630	190000	0.99													
Percent Solids																
Percent Solids																
pH																
pH																
Sulfide, Total																
Sulfide, Total																
Semi Volatile Organic Compound																
1,2,4-Trichlorobenzene	27	190	26	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
1,2-Dichlorobenzene	60	10000	930	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
1,3,5-Trinitrobenzene			3200													
1,3-Dichlorobenzene	61	10000		0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
1,3-Dinitrobenzene	0.1	190000	8.2													
1,4-Dichlorobenzene	10	230	11	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
1-Methylnaphthalene			73													
2,4,5-Trichlorophenol	5900	190000	8200	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
2,4,6-Trichlorophenol	28	190000	82	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
2,4,6-Trinitrotoluene	0.2	190000	51													
2,4-Dichlorophenol	2	190000	250	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
2,4-Dimethylphenol	190	10000	1600	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
2,4-Dinitrophenol	19	190000	160	2 U	2 U	2 U	2 U	1.9 U	0.19 U							
2,4-Dinitrotoluene	0.88	190000	7.4	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
2,6-Dinitrotoluene	0.18	190000	1.5	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
2-Amino-4,6-Dinitrotoluene			11													
2-Chloronaphthalene	17000	190000	6000	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
2-Chlorophenol	4.4	10000	580	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
2-Methylnaphthalene	100	270	300	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0037 J							
2-Methylphenol	490	190000	4100	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
2-Nitroaniline	0.044	4.5	800	2 U	2 U	2 U	2 U	1.9 U	0.19 U							
2-Nitrophenol	78	190000		0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
2-Nitrotoluene			15													
3-& 4-Methylphenol [1]	49	190000	1600	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
3,3'-Dichlorobenzidine	33	190000	5.1	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
3-Nitroaniline				2 U	2 U	2 U	2 U	1.9 U	0.19 U							
3-Nitrotoluene			8.2													
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6	2 U	2 U	2 U	2 U	1.9 U	0.19 U							
4-Amino-2,6-Dinitrotoluene			11													
4-Bromophenyl phenyl ether				0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
4-Chloro-3-Methyl-Phenol	2000	190000	8200	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	IWTP039-CS-001 3 - 4 10/11/11	IWTP039-CS-002 3 - 4 10/11/11	IWTP039-CS-003 3 - 4 10/13/11	IWTP039-CS-004 3 - 4 10/13/11	IWTP039-CS-005 3 - 4 10/13/11	IWTP039-CS-006 3 - 4 10/13/11	SPBA-SB-006 0 - 1 3/27/17	SPBA-SB-006 10 - 10.5 3/27/17	SPBA-SB-006 5 - 5.5 3/27/17	SPBA-SB-007 0.5 - 1 3/28/17	SPBA-SB-007 10 - 10.5 3/28/17	SPBA-SB-007 5 - 5.5 3/28/17	SPBA-SB-008 0.5 - 1 3/29/17
4-Chloroaniline	1.8	190000	11	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
4-Chlorodiphenyl Ether				0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
4-Nitroaniline	14	190000	110	2 U	2 U	2 U	2 U	1.9 U	0.19 U							
4-Nitrophenol	6	190000		2 U	2 U	2 U	2 U	1.9 U	0.19 U							
4-Nitrotoluene			140													
Acenaphthene	4700	190000	4500	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Acenaphthylene	6600	190000		0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Anthracene	350	190000	23000	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Benzo (A) Anthracene	340	190000	21	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0015 J							
Benzo (a) Pyrene	46	190000	2.1	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.001 J							
Benzo (b) Fluoranthene	170	190000	21	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0016 J							
Benzo (g,h,i) Perylene	180	190000		0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Benzo (k) Fluoranthene	610	190000	210	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Bis(2-Chloroethoxy) Methane	29	10000	250	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Bis(2-Chloroethyl) Ether	0.076	7.6	1	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Bis(2-Chloroisopropyl) Ether	30	250	4700	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Bis(2-Ethylhexyl) Phthalate	130	10000	160	0.79 U	0.79 U	0.78 U	0.78 U	0.76 U	0.076 U							
Butylbenzylphthalate	10000	10000	1200	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Carbazole	89	190000		0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Chrysene	230	190000	2100	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0021 J							
Dibenzo (a,h) Anthracene	270	190000	2.1	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Dibenzofuran	250	190000	120	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Diethylphthalate	7800	10000	66000	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Dimethylphthalate				0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Di-n-Butylphthalate	4000	10000	8200	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Di-n-octylphthalate	10000	10000	820	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Fluoranthene	3200	190000	3000	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0025 J							
Fluorene	3800	190000	3000	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Hexachlorobenzene	0.96	190000	0.96	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Hexachlorobutadiene	42	10000	5.3	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Hexachlorocyclopentadiene	91	10000	0.75	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Hexachloroethane	0.56	270	8	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	0.2	190000	38													
Indeno (1,2,3-cd) Pyrene	18000	190000	21	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Isophorone	10	10000	2400	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Methyl-2,4,6-Trinitrophenylnitramine			230													
Naphthalene	25	77	8.6	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0028 J							
Nitrobenzene	0.63	63	22	0.79 U	0.79 U	0.78 U	0.78 U	0.76 U	0.076 U							
Nitroglycerine	0.5	10000	8.2													
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
N-Nitrosodiphenylamine	15	990	470	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Octahydro-Tetranitro-1,3,5,7-Tetrazocine	40	190000	5700													
Pentachlorophenol	5	190000	4	0.39 U	0.39 U	0.38 U	0.38 U	0.37 U	0.037 U							
Pentaerythritol tetranitrate			530													
Phenanthrene	10000	190000		0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0033 J							
Phenol	200	18000	25000	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0076 U							
Picric acid			160													
Pyrene	2200	190000	2300	0.079 U	0.079 U	0.078 U	0.078 U	0.076 U	0.0025 J							
Total Solids																
Percent Solids																
Petroleum Hydrocarbons																
N-Hexane Extractable Material																
Volatile Organic Compound																
1,1,1,2-Tetrachloroethane	18	340	8.8	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
1,1,1-Trichloroethane	20	10000	3600	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
1,1,2,2-Tetrachloroethane	0.43	44	2.7	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
1,1,2-Trichloroethane	0.5	18	0.63	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
1,1-Dichloroethane	16	1600	16	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
1,1-Dichloroethene	0.7	10000	100	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 UJ	0.0046 UJ	0.0052 UJ	0.0051 U	0.0048 U	0.0047 U	0.0047 U
1,2,4-Trimethylbenzene	300	5400	180													
1,2-Dibromoethane	0.005	4.2	0.16	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
1,2-Dichloroethane	0.5	98	2	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
1,2-Dichloropropane	0.5	0.69	6.6	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
1,3,5-Trimethylbenzene	93	5400	150													
1,4-Dioxane	2.7	510	24	1.1 U	1.1 U	0.94 U	0.94 U	0.87 U	0.95 U	0 R	0.91 R	1 R	1 R	0.97 R	0.94 R	0.95 R
2-Butanone	400	10000	19000	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
2-Hexanone	26	2700	130	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	IWTP039-CS-001 3 - 4 10/11/11	IWTP039-CS-002 3 - 4 10/11/11	IWTP039-CS-003 3 - 4 10/13/11	IWTP039-CS-004 3 - 4 10/13/11	IWTP039-CS-005 3 - 4 10/13/11	IWTP039-CS-006 3 - 4 10/13/11	SPBA-SB-006 0 - 1 3/27/17	SPBA-SB-006 10 - 10.5 3/27/17	SPBA-SB-006 5 - 5.5 3/27/17	SPBA-SB-007 0.5 - 1 3/28/17	SPBA-SB-007 10 - 10.5 3/28/17	SPBA-SB-007 5 - 5.5 3/28/17	SPBA-SB-008 0.5 - 1 3/29/17
4-Methyl-2-Pentanone	780	10000	14000	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Acetone	8800	10000	110000	0.023 U	0.022 U	0.019 U	0.019 U	0.017 U	0.019 U	0.023 U	0.018 U	0.021 U	0.02 U	0.019 U	0.019 U	0.019 U
Acrylonitrile	0.37	37	1.1	0.11 U	0.11 U	0.094 U	0.094 U	0.087 U	0.095 U	0.058 U	0.046 U	0.052 U	0.051 U	0.048 U	0.047 U	0.047 U
Benzene	0.5	330	5.1	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Bromochloromethane	9	3600	63	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Bromodichloromethane	8	69	1.3	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Bromoform	8	2300	86	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Bromomethane	1	460	3	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 UJ	0.0048 UJ	0.0047 UJ	0.0047 UJ
Carbon Disulfide	620	10000	350	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 UJ	0.0046 UJ	0.0052 UJ	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Carbon Tetrachloride	0.5	430	2.9	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Chlorobenzene	10	4500	130	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Chlorodibromomethane	8	10000	39	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Chloroethane	8800	10000	2300	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Chloroform	8	110	1.4	0.0057 U	0.0055 U	0.0047 U	0.00065 J	0.00066 J	0.00069 J	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Chloromethane	3	1400	46	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 UJ	0.0046 UJ	0.0052 UJ	0.0051 U	0.0048 U	0.0047 U	0.0047 UJ
cis-1,2-Dichloroethene	7	10000	230	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
cis-1,3-Dichloropropene	2.7	640	8.2	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Ethylbenzene	70	1000	25	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Isopropylbenzene	2500	10000	990													
Methyl tert-butyl ether	2	9800	210	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Methylene chloride	0.5	10000	320	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0023 J	0.0046 UJ	0.0028 J	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Naphthalene	25	77	8.6													
Styrene	24	10000	3500	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Tetrachloroethene	0.5	3600	39	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Toluene	100	10000	4700	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
trans-1,2-Dichloroethene	10	10000	30	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 UJ	0.0046 UJ	0.0052 UJ	0.0051 U	0.0048 U	0.0047 U	0.0047 U
trans-1,3-Dichloropropene [2]	2.7	640	8.2	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Trichloroethene	0.5	180	1.9	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Vinyl Chloride	0.2	290	1.7	0.0057 U	0.0055 U	0.0047 U	0.0047 U	0.0044 U	0.0047 U	0.0058 U	0.0046 U	0.0052 U	0.0051 U	0.0048 U	0.0047 U	0.0047 U
Xylenes (Total)	1000	9100	250	0.017 U	0.016 U	0.014 U	0.014 U	0.013 U	0.014 U	0.012 U	0.0091 U	0.01 U	0.01 U	0.0097 U	0.0094 U	0.0095 U

Notes:

Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	SPBA-SB-008 10 - 10.5 3/29/17	SPBA-SB-008 5 - 5.5 3/29/17	SPBA-SB-009 0.5 - 1 3/29/17	SPBA-SB-009 10 - 10.5 3/29/17	SPBA-SB-009 5 - 5.5 3/29/17	SPBA-SB-010 0.5 - 1 3/30/17	SPBA-SB-010 10 - 10.5 3/30/17	SPBA-SB-010 5 - 5.5 3/30/17
Cyanide, Free											
Cyanide, Free	200	190000	15								
Cyanide, Total											
Cyanide, Total	200	190000	15								
METAL											
Antimony	27	190000	47								
Arsenic	29	190000	3								
Barium	8200	190000	22000								
Beryllium	320	190000	230								
Cadmium	38	190000	10								
Chromium	190	140000	6.3								
Copper	43000	190000	4700								
Hexavalent Chromium	190	140000	6.3								
Lead	450	190000	800								
Mercury	10	190000	4.6								
Nickel	650	190000	2200								
Selenium	26	190000	580								
Silver	84	190000	580								
Thallium	14	190000	1.2								
Vanadium	680	190000	580								
Zinc	12000	190000	35000								
Polychlorinated Biphenols											
Aroclor-1016	190	10000	5.1								
Aroclor-1221	0.68	27	0.83								
Aroclor-1232	0.54	10000	0.72								
Aroclor-1242	17	10000	0.95								
Aroclor-1248	67	10000	0.94								
Aroclor-1254	380	10000	0.97								
Aroclor-1260	630	190000	0.99								
Percent Solids											
Percent Solids											
pH											
pH											
Sulfide, Total											
Sulfide, Total											
Semi Volatile Organic Compound											
1,2,4-Trichlorobenzene	27	190	26								
1,2-Dichlorobenzene	60	10000	930								
1,3,5-Trinitrobenzene			3200								
1,3-Dichlorobenzene	61	10000									
1,3-Dinitrobenzene	0.1	190000	8.2								
1,4-Dichlorobenzene	10	230	11								
1-Methylnaphthalene			73								
2,4,5-Trichlorophenol	5900	190000	8200								
2,4,6-Trichlorophenol	28	190000	82								
2,4,6-Trinitrotoluene	0.2	190000	51								
2,4-Dichlorophenol	2	190000	250								
2,4-Dimethylphenol	190	10000	1600								
2,4-Dinitrophenol	19	190000	160								
2,4-Dinitrotoluene	0.88	190000	7.4								
2,6-Dinitrotoluene	0.18	190000	1.5								
2-Amino-4,6-Dinitrotoluene			11								
2-Chloronaphthalene	17000	190000	6000								
2-Chlorophenol	4.4	10000	580								
2-Methylnaphthalene	100	270	300								
2-Methylphenol	490	190000	4100								
2-Nitroaniline	0.044	4.5	800								
2-Nitrophenol	78	190000									
2-Nitrotoluene			15								
3-& 4-Methylphenol [1]	49	190000	1600								
3,3'-Dichlorobenzidine	33	190000	5.1								
3-Nitroaniline											
3-Nitrotoluene			8.2								
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6								
4-Amino-2,6-Dinitrotoluene			11								
4-Bromophenyl phenyl ether											
4-Chloro-3-Methyl-Phenol	2000	190000	8200								

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	SPBA-SB-008 10 - 10.5 3/29/17	SPBA-SB-008 5 - 5.5 3/29/17	SPBA-SB-009 0.5 - 1 3/29/17	SPBA-SB-009 10 - 10.5 3/29/17	SPBA-SB-009 5 - 5.5 3/29/17	SPBA-SB-010 0.5 - 1 3/30/17	SPBA-SB-010 10 - 10.5 3/30/17	SPBA-SB-010 5 - 5.5 3/30/17
4-Chloroaniline	1.8	190000	11								
4-Chlorodiphenyl Ether											
4-Nitroaniline	14	190000	110								
4-Nitrophenol	6	190000									
4-Nitrotoluene			140								
Acenaphthene	4700	190000	4500								
Acenaphthylene	6600	190000									
Anthracene	350	190000	23000								
Benzo (A) Anthracene	340	190000	21								
Benzo (a) Pyrene	46	190000	2.1								
Benzo (b) Fluoranthene	170	190000	21								
Benzo (g,h,i) Perylene	180	190000									
Benzo (k) Fluoranthene	610	190000	210								
Bis(2-Chloroethoxy) Methane	29	10000	250								
Bis(2-Chloroethyl) Ether	0.076	7.6	1								
Bis(2-Chloroisopropyl) Ether	30	250	4700								
Bis(2-Ethylhexyl) Phthalate	130	10000	160								
Butylbenzylphthalate	10000	10000	1200								
Carbazole	89	190000									
Chrysene	230	190000	2100								
Dibenzo (a,h) Anthracene	270	190000	2.1								
Dibenzofuran	250	190000	120								
Diethylphthalate	7800	10000	66000								
Dimethylphthalate											
Di-n-Butylphthalate	4000	10000	8200								
Di-n-octylphthalate	10000	10000	820								
Fluoranthene	3200	190000	3000								
Fluorene	3800	190000	3000								
Hexachlorobenzene	0.96	190000	0.96								
Hexachlorobutadiene	42	10000	5.3								
Hexachlorocyclopentadiene	91	10000	0.75								
Hexachloroethane	0.56	270	8								
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	0.2	190000	38								
Indeno (1,2,3-cd) Pyrene	18000	190000	21								
Isophorone	10	10000	2400								
Methyl-2,4,6-Trinitrophenylnitramine			230								
Naphthalene	25	77	8.6								
Nitrobenzene	0.63	63	22								
Nitroglycerine	0.5	10000	8.2								
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33								
N-Nitrosodiphenylamine	15	990	470								
Octahydro-Tetranitro-1,3,5,7-Tetrazocine	40	190000	5700								
Pentachlorophenol	5	190000	4								
Pentaerythritol tetranitrate			530								
Phenanthrene	10000	190000									
Phenol	200	18000	25000								
Picric acid			160								
Pyrene	2200	190000	2300								
Total Solids											
Percent Solids											
Petroleum Hydrocarbons											
N-Hexane Extractable Material											
Volatile Organic Compound											
1,1,1,2-Tetrachloroethane	18	340	8.8	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
1,1,1-Trichloroethane	20	10000	3600	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
1,1,2,2-Tetrachloroethane	0.43	44	2.7	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
1,1,2-Trichloroethane	0.5	18	0.63	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
1,1-Dichloroethane	16	1600	16	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
1,1-Dichloroethene	0.7	10000	100	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
1,2,4-Trimethylbenzene	300	5400	180								
1,2-Dibromoethane	0.005	4.2	0.16	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
1,2-Dichloroethane	0.5	98	2	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
1,2-Dichloropropane	0.5	0.69	6.6	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
1,3,5-Trimethylbenzene	93	5400	150								
1,4-Dioxane	2.7	510	24	0.87 R	0.85 R	1 R	0.99 R	1 R	1 R	1 R	1 R
2-Butanone	400	10000	19000	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
2-Hexanone	26	2700	130	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U

TABLE 4.1-3
Soil Data Collected After Soils Risk Assessment - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	SPBA-SB-008 10 - 10.5 3/29/17	SPBA-SB-008 5 - 5.5 3/29/17	SPBA-SB-009 0.5 - 1 3/29/17	SPBA-SB-009 10 - 10.5 3/29/17	SPBA-SB-009 5 - 5.5 3/29/17	SPBA-SB-010 0.5 - 1 3/30/17	SPBA-SB-010 10 - 10.5 3/30/17	SPBA-SB-010 5 - 5.5 3/30/17
4-Methyl-2-Pentanone	780	10000	14000	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Acetone	8800	10000	110000	0.017 U	0.017 U	0.021 U	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U
Acrylonitrile	0.37	37	1.1	0.044 U	0.043 U	0.051 U	0.049 U	0.05 U	0.052 U	0.05 U	0.051 U
Benzene	0.5	330	5.1	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Bromochloromethane	9	3600	63	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Bromodichloromethane	8	69	1.3	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Bromoform	8	2300	86	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Bromomethane	1	460	3	0.0044 UJ	0.0043 UJ	0.0051 UJ	0.0049 UJ	0.005 UJ	0.0052 UJ	0.005 UJ	0.0051 UJ
Carbon Disulfide	620	10000	350	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Carbon Tetrachloride	0.5	430	2.9	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Chlorobenzene	10	4500	130	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Chlorodibromomethane	8	10000	39	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Chloroethane	8800	10000	2300	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Chloroform	8	110	1.4	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Chloromethane	3	1400	46	0.0044 UJ	0.0043 UJ	0.0051 UJ	0.0049 UJ	0.005 UJ	0.0052 U	0.005 U	0.0051 U
cis-1,2-Dichloroethene	7	10000	230	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
cis-1,3-Dichloropropene	2.7	640	8.2	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Ethylbenzene	70	1000	25	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Isopropylbenzene	2500	10000	990								
Methyl tert-butyl ether	2	9800	210	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Methylene chloride	0.5	10000	320	0.0044 U	0.0043 U	0.0053 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Naphthalene	25	77	8.6								
Styrene	24	10000	3500	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Tetrachloroethene	0.5	3600	39	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Toluene	100	10000	4700	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
trans-1,2-Dichloroethene	10	10000	30	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
trans-1,3-Dichloropropene [2]	2.7	640	8.2	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Trichloroethene	0.5	180	1.9	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Vinyl Chloride	0.2	290	1.7	0.0044 U	0.0043 U	0.0051 U	0.0049 U	0.005 U	0.0052 U	0.005 U	0.0051 U
Xylenes (Total)	1000	9100	250	0.0087 U	0.0085 U	0.01 U	0.0099 U	0.01 U	0.01 U	0.01 U	0.01 U

Notes:

Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41-TR-1A 5 - 5.5 1/21/09	B41-TR-1B 5 - 5.5 1/21/09	B41-TR-1C 5 - 5.5 1/21/09	B41-TR-1D 5 - 5.5 1/21/09	B41-TR-1D 5 - 5.5 1/21/09	B41-TR-1D 6 - 6.5 1/21/09	B41-TR-1E 10.5 - 11 2/2/09	B41-TR-1F 10.5 - 11 2/2/09	B41-TR-1G 10.5 - 11 2/2/09	B41-TR-1H 10.5 - 11 2/2/09	B41-TR-1I 10 - 10.5 2/2/09	B41-TR-1J 9.5 - 10 2/2/09	B41-TR-1K 9.5 - 10 2/2/09	B41-TR-1K 9.5 - 10 2/2/09	B41-TR-2 4.5 - 5 1/29/09	NPA-EX-001 11 - 12 7/13/10	NPA-EX-002 11 - 12 7/13/10	NPA-EX-004 4 - 5 7/14/10
Cyanide, Free																					
Cyanide, Free	200	190000	15	0.28 B	0.62 U	0.64 U	0.6 U	0.62 U	0.63 U	0.61 U	0.62 U	0.61 U	0.62 U	0.61 U	0.57 U	0.62 U	0.59 U	5.3			
Cyanide, Total																					
Cyanide, Total	200	190000	15	8.4	0.98	0.16 B	0.6 U	3.8	0.63 U	0.61 U	0.62 U	0.61 U	0.62 U	0.61 U	0.57 U	0.62 U	1.1	17.5			
METAL																					
Antimony	27	190000	47	0.3	0.26	0.18 B	0.32	0.17 B	0.22 B	0.24 R	0.024 J	0.24 R	0.014 J	0.24 R	0.23 R	0.25 R	0.24 R				
Arsenic	29	190000	3	5.5	4.6	5.6	7	5.2	6.1	2 J	3.3 J	2 J	3.5 J	1.3 J	0.75 J	3.7 J	5 J				
Barium	8200	190000	22000	59.6 J	64.8 J	56 J	42.9 J	52.5 J	53 J	65.8	31.9	58.1	38.9	59.4	47.3	64.1	64.5				
Beryllium	320	190000	230	0.55	0.42	0.51	0.72	0.43	0.66	0.62	0.74	0.63	1.1	0.51	0.26	0.57	0.65				
Cadmium	38	190000	10	36.9	3.9	4.7	1.9	7.1	0.98	0.14	0.18	0.17	0.46	0.19	2.2	5.8	12.7				
Chromium	190	140000	6.3	69.5 J	25.6 J	16.7 J	17 J	17.5 J	26.4 J	8.9 J	16.7 J	11.4 J	9.6 J	10.7 J	20.4 J	51.4 J	90.6 J				
Copper	43000	190000	4700	12.6 J E	8.2 J	8.3 J	11.7 J	10.9 J	11.9 J	6.4	9	6.6	12	5.3	7.3	6.3	8.3				
Hexavalent Chromium	190	140000	6.3	4.6	0.68	0.49 B	0.39 B	0.34 B	0.95	0.48 U	0.49 U	0.48 U	0.49 U	0.48 U	0.45 U	0.49 U	0.19 B				
Lead	450	190000	800	21.9	14.7	14	23.6	13.4	21	11.6 J	13.8 J	13.5 J	19.5 J	13.4 J	13.1 J	11.6 J	14.1 J				
Mercury	10	190000	4.6	0.059 J	0.06 J	0.067 J	0.051 J	0.059 J	0.048 J	0.05	0.034 B	0.024 B	0.031 B	0.042	0.041	0.038 B	0.043				
Nickel	650	190000	2200	240 E	28.6	16	20.9	13.2	19.5	7 J	5.7 J	7.6 J	13.4 J	7 J	17 J	139 J	292 J				
Selenium	26	190000	580	0.49 B	0.42 B	0.44 B	0.5 B	0.38 B	0.67	0.65 J	0.29 J	0.63 J	0.66 J	0.57 J	0.36 J	0.48 J	0.54 J				
Silver	84	190000	580	0.058 B	0.048 B	0.035 B	0.026 B	0.026 B	0.043 B	0.1 B	0.027 B	0.067 B	0.035 B	0.059 B	0.052 B	0.043 B	0.044 B				
Thallium	14	190000	1.2	0.12 B	0.11 B	0.092 B	0.089 B	0.094 B	0.091 B	0.23	0.12	0.23	0.11 B	0.18	0.088 B	0.088 B	0.11 B				
Vanadium	680	190000	580	23 J	18.3 J	20.1 J	19.9 J	18.7 J	19.7 J	16.8 J	26.1 J	24.3 J	16.6 J	19.3 J	14.1 J	25 J	26.8 J				
Zinc	12000	190000	35000	130 J E	28.8 J	23.4 J	63.8 J	40.6 J	35.4 J	13.6 J	9.2 J	13.2 J	21.9 J	11.4 J	20.1 J	53.8 J	88.1 J				
Polychlorinated Biphenols																					
Aroclor-1016	190	10000	5.1																		
Aroclor-1221	0.68	27	0.83																		
Aroclor-1232	0.54	10000	0.72																		
Aroclor-1242	17	10000	0.95																		
Aroclor-1248	67	10000	0.94																		
Aroclor-1254	380	10000	0.97																		
Aroclor-1260	630	190000	0.99																		
Percent Solids																					
Percent Solids																					
Semi Volatile Organic Compound																					
1,2,4-Trichlorobenzene	27	190	26	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.038 J	0.021 J				
1,2-Dichlorobenzene	60	10000	930	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.063 J	0.045 J				
1,3-Dichlorobenzene	61	10000		2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
1,4-Dichlorobenzene	10	230	11	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.021 J	0.39 U				
2,4,5-Trichlorophenol	5900	190000	8200	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
2,4,6-Trichlorophenol	28	190000	82	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
2,4-Dichlorophenol	2	190000	250	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
2,4-Dimethylphenol	190	10000	1600	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
2,4-Dinitrophenol	19	190000	160	11 U	11 U	2.2 U	10 U	10 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.9 U	2.1 U	2 U				
2,4-Dinitrotoluene	0.88	190000	7.4	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
2,6-Dinitrotoluene	0.18	190000	1.5	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
2-Chloronaphthalene	17000	190000	6000	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
2-Chlorophenol	4.4	10000	580	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
2-Methylnaphthalene	100	270	300	2.1 U	2.1 U	0.093 J	1.9 U	2 U	0.049 J	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
2-Methylphenol	490	190000	4100	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
2-Nitroaniline	0.044	4.5	800	11 U	11 U	2.2 U	10 U	10 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.9 U	2.1 U	2 U				
2-Nitrophenol	78	190000		2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
3-& 4-Methylphenol [1]	49	190000	1600	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
3,3'-Dichlorobenzidine	33	190000	5.1	10 U	10 U	2 U	9.4 U	9.7 U	2 U	1.9 U	2 U	1.9 U	2 U	2 U	1.8 U	2 U	1.9 U				
3-Nitroaniline				11 U	11 U	2.2 U	10 U	10 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.9 U	2.1 U	2 U				
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6	11 U	11 U	2.2 U	10 U	10 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.9 U	2.1 U	2 U				
4-Bromophenyl phenyl ether				2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
4-Chloro-3-Methyl-Phenol	2000	190000	8200	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
4-Chloroaniline	1.8	190000	11	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
4-Chlorodiphenyl Ether				2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
4-Nitroaniline	14	190000	110	11 U	11 U	2.2 U	10 U	10 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.9 U	2.1 U	2 U				
4-Nitrophenol	6	190000		11 U	11 U	2.2 U	10 U	10 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.9 U	2.1 U	2 U				
Acenaphthene	4700	190000	4500	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Acenaphthylene	6600	190000		2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Anthracene	350	190000	23000	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Benzo (A) Anthracene	340	190000	21	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.037 J	0.064 J				
Benzo (a) Pyrene	46	190000	2.1	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.031 J				
Benzo (b) Fluoranthene	170	190000	21	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.05 J	0.08 J				
Benzo (g,h,i) Perylene	180	190000		2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.019 J				
Benzo (k) Fluoranthene	610	190000	210	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41-TR-1A 5 - 5.5 1/21/09	B41-TR-1B 5 - 5.5 1/21/09	B41-TR-1C 5 - 5.5 1/21/09	B41-TR-1D 5 - 5.5 1/21/09	B41-TR-1D 5 - 5.5 1/21/09	B41-TR-1D 6 - 6.5 1/21/09	B41-TR-1E 10.5 - 11 2/2/09	B41-TR-1F 10.5 - 11 2/2/09	B41-TR-1G 10.5 - 11 2/2/09	B41-TR-1H 10.5 - 11 2/2/09	B41-TR-1I 10 - 10.5 2/2/09	B41-TR-1J 9.5 - 10 2/2/09	B41-TR-1K 9.5 - 10 2/2/09	B41-TR-1K 9.5 - 10 2/2/09	B41-TR-2 4.5 - 5 1/29/09	NPA-EX-001 11 - 12 7/13/10	NPA-EX-002 11 - 12 7/13/10	NPA-EX-004 4 - 5 7/14/10
Bis(2-Chloroethoxy) Methane	29	10000	250	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Bis(2-Chloroethyl) Ether	0.076	7.6	1	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Bis(2-Chloroisopropyl) Ether	30	250	4700	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Bis(2-Ethylhexyl) Phthalate	130	10000	160	2.1 U	2.1 U	0.42 U	1.9 U	0.43 J	0.42 U	0.4 U	0.41 U	0.093 J	0.041 J	0.4 U	0.27 J	1.6	1				
Butylbenzylphthalate	10000	10000	1200	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Carbazole	89	190000		2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Chrysene	230	190000	2100	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.054 J	0.076 J				
Dibenzo (a,h) Anthracene	270	190000	2.1	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Dibenzofuran	250	190000	120	2.1 U	2.1 U	0.033 J	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Diethylphthalate	7800	10000	66000	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Dimethylphthalate				2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Di-n-Butylphthalate	4000	10000	8200	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.03 J	0.046 J	0.035 J				
Di-n-octylphthalate	10000	10000	820	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Fluoranthene	3200	190000	3000	2.1 U	2.1 U	0.056 J	1.9 U	2 U	0.072 J	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.013 J	0.15 J	0.25 J				
Fluorene	3800	190000	3000	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Hexachlorobenzene	0.96	190000	0.96	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Hexachlorobutadiene	42	10000	5.3	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Hexachlorocyclopentadiene	91	10000	0.75	10 U	10 U	2 U	9.4 U	9.7 U	2 U	1.9 U	2 U	1.9 U	2 U	2 U	1.8 U	2 U	1.9 U				
Hexachloroethane	0.56	270	8	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Indeno (1,2,3-cd) Pyrene	18000	190000	21	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.01 J	0.013 J				
Isophorone	10	10000	2400	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Naphthalene	25	77	8.6	2.1 U	2.1 U	0.081 J	1.9 U	2 U	0.024 J	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Nitrobenzene	0.63	63	22	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
N-Nitrosodiphenylamine	15	990	470	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Pentachlorophenol	5	190000	4	10 U	10 U	2 U	9.4 U	9.7 U	2 U	1.9 U	2 U	1.9 U	2 U	2 U	1.8 U	2 U	1.9 U				
Phenanthrene	10000	190000		2.1 U	2.1 U	0.069 J	1.9 U	2 U	0.049 J	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.018 J				
Phenol	200	18000	25000	2.1 U	2.1 U	0.42 U	1.9 U	2 U	0.42 U	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.41 U	0.39 U				
Pyrene	2200	190000	2300	2.1 U	2.1 U	0.049 J	1.9 U	2 U	0.083 J	0.4 U	0.41 U	0.4 U	0.41 U	0.4 U	0.38 U	0.12 J	0.21 J				
Total Solids																					
Percent Solids				78.8	80.2	78.6	83.9	81.3	79.4	82.4	81	81.7	81	81.8	87.9	80.4	84.6	63.7			
Volatile Organic Compound																					
1,1,1,2-Tetrachloroethane	18	340	8.8	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
1,1,1-Trichloroethane	20	10000	3600	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0018 J			
1,1,2,2-Tetrachloroethane	0.43	44	2.7	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
1,1,2-Trichloroethane	0.5	18	0.63	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
1,1-Dichloroethane	16	1600	16	0.0053 U	0.0054 U	0.0019 J	0.005 U	0.0054 U	0.0012 J	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0017 J			
1,1-Dichloroethene	0.7	10000	100	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0016 J	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
1,2,4-Trimethylbenzene	300	5400	180																0.0047 U	0.0051 U	0.34
1,2-Dibromoethane	0.005	4.2	0.16	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
1,2-Dichloroethane	0.5	98	2	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
1,2-Dichloropropane	0.5	0.69	6.6	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
1,3,5-Trimethylbenzene	93	5400	150																0.0047 U	0.0051 U	1.7
1,4-Dioxane	2.7	510	24	1.1 U	1.1 U	1.2 U	1 U	1.1 U	1 U	1.1 U	1 U	1.2 U	54 U	1 U	0.96 U	1.1 U	1 U	1.6 U			
2-Butanone	400	10000	19000	0.021 U	0.022 U	0.024 U	0.02 U	0.021 U	0.021 U	0.022 U	0.02 U	0.023 U	1.1 U	0.02 U	0.019 U	0.023 U	0.021 U	0.0078 U			
2-Hexanone	26	2700	130	0.021 U	0.022 U	0.024 U	0.02 U	0.021 U	0.021 U	0.022 U	0.02 U	0.023 U	1.1 U	0.02 U	0.019 U	0.023 U	0.021 U	0.0078 U			
4-Methyl-2-Pentanone	780	10000	14000	0.021 U	0.022 U	0.024 U	0.02 U	0.021 U	0.021 U	0.022 U	0.02 U	0.023 U	1.1 U	0.02 U	0.019 U	0.023 U	0.021 U	0.01			
Acetone	8800	10000	110000	0.021 U	0.022 U	0.024 U	0.02 U	0.021 U	0.0069 J	0.022 U	0.02 U	0.023 U	1.1 U	0.02 U	0.019 U	0.023 U	0.021 U	0.042			
Acrylonitrile	0.37	37	1.1	0.11 U	0.11 U	0.12 U	0.1 U	0.11 U	0.1 U	0.11 U	0.1 U	0.12 U	5.4 U	0.1 U	0.096 U	0.11 U	0.1 U	0.16 U			
Benzene	0.5	330	5.1	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U	0.0047 U	0.0051 U	0.25 U
Bromochloromethane	9	3600	63	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Bromodichloromethane	8	69	1.3	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Bromoform	8	2300	86	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Bromomethane	1	460	3	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Carbon Disulfide	620	10000	350	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0025 J	0.0057 U	0.0016 J	0.0078 U			
Carbon Tetrachloride	0.5	430	2.9	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Chlorobenzene	10	4500	130	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Chlorodibromomethane	8	10000	39	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Chloroethane	8800	10000	2300	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Chloroform	8	110	1.4	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Chloromethane	3	1400	46	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
cis-1,2-Dichloroethene	7	10000	230	0.0018 J	0.0029 J	0.0038 J	0.005 U	0.0054 U	0.094	0.13	0.057	0.02	0.73	0.0034 J	0.0084	0.025	0.007	0.0015 J			
cis-1,3-Dichloropropene	2.7	640	8.2	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Ethylbenzene	70	1000	25	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.0026 J	0.00088 J	0.0057 U	0.0052 U	0.0024 J	0.0047 U	0.0051 U	0.25 U
Isopropylbenzene	2500	10000	990																0.0047 U	0.0051 U	0.25 U
Methyl tert-butyl ether	2	9800	210	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U	0.0047 U	0.0051 U	0.25 U
Methylene chloride	0.5	10000	320	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.072 J	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41-TR-1A 5 - 5.5 1/21/09	B41-TR-1B 5 - 5.5 1/21/09	B41-TR-1C 5 - 5.5 1/21/09	B41-TR-1D 5 - 5.5 1/21/09	B41-TR-1D 5 - 5.5 1/21/09	B41-TR-1D 6 - 6.5 1/21/09	B41-TR-1E 10.5 - 11 2/2/09	B41-TR-1F 10.5 - 11 2/2/09	B41-TR-1G 10.5 - 11 2/2/09	B41-TR-1H 10.5 - 11 2/2/09	B41-TR-1I 10 - 10.5 2/2/09	B41-TR-1J 9.5 - 10 2/2/09	B41-TR-1K 9.5 - 10 2/2/09	B41-TR-1K 9.5 - 10 2/2/09	B41-TR-2 4.5 - 5 1/29/09	NPA-EX-001 11 - 12 7/13/10	NPA-EX-002 11 - 12 7/13/10	NPA-EX-004 4 - 5 7/14/10
Styrene	24	10000	3500	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Tetrachloroethene	0.5	3600	39	0.0027 J	0.0035 J	0.0013 J	0.005 U	0.0054 U	0.0052 U	0.23	0.066	0.016	0.64	0.024	0.02	0.0063	0.0028 J	0.007 J			
Toluene	100	10000	4700	0.0014 J	0.0038 J	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.0012 J	0.0048 U	0.0057 U	0.0052 U	0.0042 J	0.0047 U	0.0051 U	0.045 J
trans-1,2-Dichloroethene	10	10000	30	0.0053 U	0.0054 U	0.0011 J	0.005 U	0.0054 U	0.011	0.0016 J	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
trans-1,3-Dichloropropene [2]	2.7	640	8.2	0.0053 U	0.0054 U	0.0059 U	0.005 U	0.0054 U	0.0052 U	0.0055 U	0.0051 U	0.0058 U	0.27 U	0.005 U	0.0048 U	0.0057 U	0.0052 U	0.0078 U			
Trichloroethene	0.5	180	1.9	0.0072	0.016	0.0089	0.005 U	0.0017 J	0.0021 J	0.15	0.03	0.0075	0.46	0.0024 J	0.0047 J	0.0065	0.0019 J	0.0024 J			
Vinyl Chloride	0.2	290	1.7	0.0053 U	0.0054 U	0.0059 U	0.0017 J	0.001 J	0.097	0.0021 J	0.0053	0.01	0.27 U	0.0013 J	0.0037 J	0.0031 J	0.0011 J	0.0078 U			
Xylenes (Total)	1000	9100	250	0.016 U	0.016 U	0.018 U	0.015 U	0.016 U	0.015 U	0.016 U	0.015 U	0.017 U	0.82 U	0.0023 J	0.0023 J	0.017 U	0.016 U	0.02 J	0.014 U	0.015 U	0.31 J
Naphthalene	25	77	8.6																0.0047 U	0.0051 U	0.46

Notes:
Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".
J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.
B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B45T-SB-005 11.1 - 11.6 5/4/11	B45T-SB-005 12 - 12.5 5/4/11	B45T-SB-009 7.5 - 8 5/4/11	B45T-SB-011 5.5 - 6 5/4/11	B45T-SB-011 9.3 - 9.8 5/4/11	B41RAA15-CS-001 3 - 4 10/12/11	B41RAA16-CS-001 5 - 6 9/22/11	B41RAA16-CS-002 5.5 - 6.5 9/22/11	B41RAA16-CS-003 5 - 6 9/22/11	B41RAA16-CS-004 4.5 - 5.5 9/22/11	B41RAA16-CS-008 4.5 - 5 9/28/11	B41RAA16-CS-011 6 - 7 10/19/11
Cyanide, Free															
Cyanide, Free	200	190000	15						0.048 U	0.05 U	0.049 U	0.051 U	0.051 U	0.052 U	0.025 J
Cyanide, Total															
Cyanide, Total	200	190000	15						0.55 J	0.16 J	0.23 J	0.65	0.75	1	0.62 U
METAL															
Antimony	27	190000	47						0.22 J B	0.31 J	0.22 U	0.23 J	0.22 U	0.19 J	0.41
Arsenic	29	190000	3						3.8	4.4 J	8.7 J	6.8 J	7.1 J	7.5	8.5
Barium	8200	190000	22000						71 B	100 B	46 B	53 B	52 B	82	160
Beryllium	320	190000	230						0.52	0.58	0.42	0.67	0.79	0.69	0.74
Cadmium	38	190000	10						1.4 B	23 J	0.14 J	1.8 J	1 J	0.5	4
Chromium	190	140000	6.3						14 B	210 B	14 B	21 B	19 B	16 B	93 B
Copper	43000	190000	4700						8.7 B	12	4.1	9.9	13	8.7	16
Hexavalent Chromium	190	140000	6.3						0.45 J	3.9 J	0.35 J	0.16 J	1.4 J	1.6	0.29 J
Lead	450	190000	800						8.7	33	10	14	16	13	20
Mercury	10	190000	4.6						0.038 U	0.018 J	0.043	0.051	0.025 J	0.048	0.048
Nickel	650	190000	2200						6.5	28 B	3.5 B	14 B	16 B	11	180
Selenium	26	190000	580						0.51 J	0.55 J	0.36 J	0.56	0.66	0.49 J	0.66
Silver	84	190000	580						0.011 J	0.11 U	0.11 U	0.11 U	0.11 U	0.027 J	0.064 J
Thallium	14	190000	1.2						0.095 J	0.11 U	0.11 U	0.11 U	0.11 U	0.15	0.087 J
Vanadium	680	190000	580						20 B	24 J	26 J	21 J	20 J	20	18
Zinc	12000	190000	35000						16 B	85 J	9.3 J	24 J	57 J	31	110
Polychlorinated Biphenols															
Aroclor-1016	190	10000	5.1												
Aroclor-1221	0.68	27	0.83												
Aroclor-1232	0.54	10000	0.72												
Aroclor-1242	17	10000	0.95												
Aroclor-1248	67	10000	0.94												
Aroclor-1254	380	10000	0.97												
Aroclor-1260	630	190000	0.99												
Percent Solids															
Percent Solids				83.3	83.2	85.3	83.7	79							
Semi Volatile Organic Compound															
1,2,4-Trichlorobenzene	27	190	26						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
1,2-Dichlorobenzene	60	10000	930						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
1,3-Dichlorobenzene	61	10000							0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
1,4-Dichlorobenzene	10	230	11						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
2,4,5-Trichlorophenol	5900	190000	8200						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
2,4,6-Trichlorophenol	28	190000	82						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
2,4-Dichlorophenol	2	190000	250						0.08 U	0.082 U	0.082 U	0.085 U	0.085 U	0.086 U	0.085 U
2,4-Dimethylphenol	190	10000	1600						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
2,4-Dinitrophenol	19	190000	160						2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.2 U	2.1 U
2,4-Dinitrotoluene	0.88	190000	7.4						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
2,6-Dinitrotoluene	0.18	190000	1.5						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
2-Chloronaphthalene	17000	190000	6000						0.08 U	0.082 U	0.082 U	0.085 U	0.085 U	0.086 U	0.085 U
2-Chlorophenol	4.4	10000	580						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
2-Methylnaphthalene	100	270	300						0.059 J	0.082 U	0.082 U	0.056 J	0.023 J	0.086 U	0.072 J
2-Methylphenol	490	190000	4100						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
2-Nitroaniline	0.044	4.5	800						2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.2 U	2.1 U
2-Nitrophenol	78	190000							0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
3-& 4-Methylphenol [1]	49	190000	1600						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U *	0.42 U *
3,3'-Dichlorobenzidine	33	190000	5.1						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
3-Nitroaniline									2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.2 U	2.1 U
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6						2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.2 U	2.1 U
4-Bromophenyl phenyl ether									0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
4-Chloro-3-Methyl-Phenol	2000	190000	8200						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
4-Chloroaniline	1.8	190000	11						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
4-Chlorodiphenyl Ether									0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
4-Nitroaniline	14	190000	110						2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.2 U	2.1 U
4-Nitrophenol	6	190000							2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.2 U	2.1 U
Acenaphthene	4700	190000	4500						0.08 U	0.082 U	0.082 U	0.55	0.011 J	0.086 U	0.019 J
Acenaphthylene	6600	190000							0.08 U	0.082 U	0.082 U	0.085 U	0.085 U	0.086 U	0.085 U
Anthracene	350	190000	23000						0.08 U	0.082 U	0.082 U	0.11	0.024 J	0.086 U	0.025 J
Benzo (A) Anthracene	340	190000	21						0.08 U	0.082 U	0.082 U	0.028 J	0.039 J	0.012 J	0.038 J
Benzo (a) Pyrene	46	190000	2.1						0.08 U	0.082 U	0.082 U	0.085 U	0.036 J	0.0088 J	0.029 J
Benzo (b) Fluoranthene	170	190000	21						0.08 U	0.082 U	0.082 U	0.033 J	0.038 J	0.015 J	0.045 J
Benzo (g,h,i) Perylene	180	190000							0.08 U	0.082 U	0.082 U	0.085 U	0.024 J	0.086 U	0.085 U
Benzo (k) Fluoranthene	610	190000	210						0.08 U	0.082 U	0.082 U	0.085 U	0.018 J-	0.086 U	0.085 U

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B45T-SB-005 11.1 - 11.6 5/4/11	B45T-SB-005 12 - 12.5 5/4/11	B45T-SB-009 7.5 - 8 5/4/11	B45T-SB-011 5.5 - 6 5/4/11	B45T-SB-011 9.3 - 9.8 5/4/11	B41RAA15-CS-001 3 - 4 10/12/11	B41RAA16-CS-001 5 - 6 9/22/11	B41RAA16-CS-002 5.5 - 6.5 9/22/11	B41RAA16-CS-003 5 - 6 9/22/11	B41RAA16-CS-004 4.5 - 5.5 9/22/11	B41RAA16-CS-008 4.5 - 5 9/28/11	B41RAA16-CS-011 6 - 7 10/19/11
Bis(2-Chloroethoxy) Methane	29	10000	250						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
Bis(2-Chloroethyl) Ether	0.076	7.6	1						0.08 U	0.082 U	0.082 U	0.085 U	0.085 U	0.086 U	0.085 U
Bis(2-Chloroisopropyl) Ether	30	250	4700						0.08 U	0.082 U	0.082 U	0.085 U	0.085 U	0.086 U	0.085 U
Bis(2-Ethylhexyl) Phthalate	130	10000	160						0.8 U	0.82 U	0.82 U	0.85 U	0.85 U	0.86 U	0.21 J
Butylbenzylphthalate	10000	10000	1200						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
Carbazole	89	190000							0.08 U	0.082 U	0.082 U	0.12	0.085 U	0.086 U	0.085 U
Chrysene	230	190000	2100						0.08 U	0.082 U	0.082 U	0.037 J	0.037 J	0.012 J	0.047 J
Dibenzo (a,h) Anthracene	270	190000	2.1						0.08 U	0.082 U	0.082 U	0.085 U	0.085 U	0.086 U	0.085 U
Dibenzofuran	250	190000	120						0.39 U	0.41 U	0.4 U	0.27 J	0.42 U	0.42 U	0.42 U
Diethylphthalate	7800	10000	66000						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
Dimethylphthalate									0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
Di-n-Butylphthalate	4000	10000	8200						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.054 J
Di-n-octylphthalate	10000	10000	820						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
Fluoranthene	3200	190000	3000						0.014 J	0.0094 J	0.082 U	0.13	0.08 J	0.018 J	0.1
Fluorene	3800	190000	3000						0.08 U	0.082 U	0.082 U	0.056 J	0.085 U	0.086 U	0.013 J
Hexachlorobenzene	0.96	190000	0.96						0.08 U	0.082 U	0.082 U	0.085 U	0.085 U	0.086 U	0.085 U
Hexachlorobutadiene	42	10000	5.3						0.08 U	0.082 U	0.082 U	0.085 U	0.085 U	0.086 U	0.085 U
Hexachlorocyclopentadiene	91	10000	0.75						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
Hexachloroethane	0.56	270	8						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
Indeno (1,2,3-cd) Pyrene	18000	190000	21						0.08 U	0.082 U	0.082 U	0.085 U	0.16	0.086 U	0.16
Isophorone	10	10000	2400						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
Naphthalene	25	77	8.6						0.038 J	0.082 U	0.082 U	0.37	0.048 J	0.086 U	0.053 J
Nitrobenzene	0.63	63	22						0.8 U	0.82 U	0.82 U	0.85 U	0.85 U	0.86 U	0.85 U
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33						0.08 U	0.082 U	0.082 U	0.085 U	0.085 U	0.086 U	0.085 U
N-Nitrosodiphenylamine	15	990	470						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
Pentachlorophenol	5	190000	4						0.39 U	0.41 U	0.4 U	0.42 U	0.42 U	0.42 U	0.42 U
Phenanthrene	10000	190000							0.035 J	0.014 J	0.082 U	0.16	0.072 J	0.086 U	0.081 J
Phenol	200	18000	25000						0.08 U	0.082 U	0.082 U	0.085 U	0.085 U	0.086 U	0.085 U
Pyrene	2200	190000	2300						0.015 J	0.0097 J	0.082 U	0.12	0.066 J	0.015 J	0.11
Total Solids															
Percent Solids															
Volatile Organic Compound															
1,1,1,2-Tetrachloroethane	18	340	8.8						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
1,1,1-Trichloroethane	20	10000	3600						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
1,1,2,2-Tetrachloroethane	0.43	44	2.7						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
1,1,2-Trichloroethane	0.5	18	0.63						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
1,1-Dichloroethane	16	1600	16						0.0053 U	1.4 U	0.0051 U	0.0015 J	0.0058 U	0.0054 U	0.0057 U
1,1-Dichloroethene	0.7	10000	100						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
1,2,4-Trimethylbenzene	300	5400	180	120	0.45	0.0047 U	0.0056 U	0.0056 U							
1,2-Dibromoethane	0.005	4.2	0.16						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
1,2-Dichloroethane	0.5	98	2						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
1,2-Dichloropropane	0.5	0.69	6.6						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
1,3,5-Trimethylbenzene	93	5400	150	30	0.13 J	0.0047 U	0.0056 U	0.0056 U							
1,4-Dioxane	2.7	510	24						1.1 U	280 UJ	1 UJ	1.2 UJ	1.2 UJ	1.1 U	1.1 U
2-Butanone	400	10000	19000						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
2-Hexanone	26	2700	130						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
4-Methyl-2-Pentanone	780	10000	14000						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Acetone	8800	10000	110000						0.021 U	5.5 U	0.02 U	0.024 U	0.023 U	0.022 U	0.01 J
Acrylonitrile	0.37	37	1.1						0.11 U	28 U	0.1 U	0.12 U	0.12 U	0.11 U	0.11 U
Benzene	0.5	330	5.1	2.5 U	0.26 U	0.0047 U	0.0056 U	0.0056 U	0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Bromochloromethane	9	3600	63						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Bromodichloromethane	8	69	1.3						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Bromoform	8	2300	86						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Bromomethane	1	460	3						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Carbon Disulfide	620	10000	350						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0023 J
Carbon Tetrachloride	0.5	430	2.9						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Chlorobenzene	10	4500	130						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Chlorodibromomethane	8	10000	39						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Chloroethane	8800	10000	2300						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Chloroform	8	110	1.4						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Chloromethane	3	1400	46						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
cis-1,2-Dichloroethene	7	10000	230						0.0053 U	37	0.0087	0.056	0.0077	0.074	0.098
cis-1,3-Dichloropropene	2.7	640	8.2						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Ethylbenzene	70	1000	25	17	0.055 J	0.0047 U	0.0056 U	0.0056 U	0.0053 U	1.4 U	0.0051 U	0.0019 J	0.0058 U	0.0054 U	0.0057 U
Isopropylbenzene	2500	10000	990	6.8	0.26 U	0.0047 U	0.0056 U	0.0056 U							
Methyl tert-butyl ether	2	9800	210	2.5 U	0.26 U	0.0047 U	0.0056 U	0.0056 U	0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Methylene chloride	0.5	10000	320						0.0053 U	1.4 U	0.0051 U	0.0031 J	0.0077	0.0013 J	0.0057 U

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B45T-SB-005 11.1 - 11.6 5/4/11	B45T-SB-005 12 - 12.5 5/4/11	B45T-SB-009 7.5 - 8 5/4/11	B45T-SB-011 5.5 - 6 5/4/11	B45T-SB-011 9.3 - 9.8 5/4/11	B41RAA15-CS-001 3 - 4 10/12/11	B41RAA16-CS-001 5 - 6 9/22/11	B41RAA16-CS-002 5.5 - 6.5 9/22/11	B41RAA16-CS-003 5 - 6 9/22/11	B41RAA16-CS-004 4.5 - 5.5 9/22/11	B41RAA16-CS-008 4.5 - 5 9/28/11	B41RAA16-CS-011 6 - 7 10/19/11
Styrene	24	10000	3500						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Tetrachloroethene	0.5	3600	39						0.0053 U	1.4 U	0.00071 J	0.019	0.0047 J	0.0019 J	0.046
Toluene	100	10000	4700	28	0.097 J	0.0047 U	0.0056 U	0.0056 U	0.0053 U	0.73 J	0.0051 U	0.012	0.0058 U	0.0054 U	0.00083 J
trans-1,2-Dichloroethene	10	10000	30						0.0053 U	5.1	0.0014 J	0.028	0.0026 J	0.032	0.025
trans-1,3-Dichloropropene [2]	2.7	640	8.2						0.0053 U	1.4 U	0.0051 U	0.0061 U	0.0058 U	0.0054 U	0.0057 U
Trichloroethene	0.5	180	1.9						0.0053 U	1.4	0.0051 U	0.014	0.01	0.017	0.016
Vinyl Chloride	0.2	290	1.7						0.0053 U	16	0.0051 U	0.022	0.0058 U	0.0054 U	0.015
Xylenes (Total)	1000	9100	250	130	0.45 J	0.014 U	0.017 U	0.017 U	0.016 U	4.2 U	0.015 U	0.018 U	0.017 U	0.016 U	0.017 U
Naphthalene	25	77	8.6	25	0.18 J	0.0047 U	0.0056 U	0.013							

Notes:
Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".
J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.
B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41RAA16-CS-012 6 - 7 10/19/11	B41RAA16-CS-012 6 - 7 10/19/11	B41RAA16-CS-014 6 - 7 10/19/11	B41RAA17-CS-001 11.5 - 12.5 10/5/11	B41RAA3-CS-001 2 - 3 10/12/11	B41RAA3-CS-002 2 - 3 10/12/11	B4ND-CS-007 12 - 13 10/26/11	IWTP031-CS-001 11 - 12 10/5/11	IWTP031-CS-002 11 - 12 10/5/11	IWTP031-CS-003 11 - 12 10/5/11	IWTP031-CS-004 11 - 12 10/5/11
Cyanide, Free														
Cyanide, Free	200	190000	15	0.049 U	0.051 U	0.05 U	0.05 U	0.046 U	0.047 U	0.045 U	0.049 U	0.049 U	0.05 U	0.05 U
Cyanide, Total														
Cyanide, Total	200	190000	15	0.59 U	0.22 J	0.12 J	0.63 U	0.12 J	0.15 J	0.55 U	0.13 J	0.47 J	0.38 J	0.15 J
METAL														
Antimony	27	190000	47	0.087 J	0.09 J	0.23 J	0.32 B	0.048 J B	0.024 J B	0.27 B	0.11 J B	0.19 J B	0.31 B	0.093 J B
Arsenic	29	190000	3	2.3	3.2	5.5	7.8	1.7	0.82	3.4	4.1	2.7	6.6	3.1
Barium	8200	190000	22000	43	33	80	55 B	69 B	65 B	21 B	40 B	93 B	23 B	58 B
Beryllium	320	190000	230	0.28	0.39	0.57	2.3	0.33	0.4	0.55	0.66	0.5	0.86	0.3
Cadmium	38	190000	10	0.21	0.14	14	0.53	0.093 J B	0.1 J B	0.16	0.3	1	0.32	0.74
Chromium	190	140000	6.3	14 B	16 B	54 B	10 B	9.8 B	9.9 B	16 B	17 B	18 B	14 B	17 B
Copper	43000	190000	4700	6.8	8.3	15	17	2.9 B	2.9 B	18	4.4	3.6	19	4.9
Hexavalent Chromium	190	140000	6.3	1.4	1.1	2.2	0.5 U	0.68	0.25 J	0.66	0.22 J	0.69	0.5 U	0.56
Lead	450	190000	800	8	9.3	15	44	6.9	8.4	13 B	15	13	17	9.1
Mercury	10	190000	4.6	0.035 J	0.036 J	0.12	0.1	0.038 U	0.032 J	0.072	0.014 J	0.018 J	0.03 J	0.02 J
Nickel	650	190000	2200	7.3	7.9	90	37 B	3	3.9	18	8.3 B	5.1 B	14 B	5 B
Selenium	26	190000	580	0.27 J	0.34 J	0.65	1.6	0.25 J	0.21 J	0.39 J	0.12 J	0.17 J	0.28 J	0.18 J
Silver	84	190000	580	0.018 J	0.024 J	0.062 J	0.091 J	0.018 J	0.018 J	0.017 J	0.02 J	0.027 J	0.026 J	0.021 J
Thallium	14	190000	1.2	0.13	0.13	0.13	0.16 B	0.096 J	0.14	0.081 J	0.092 J B	0.11 J B	0.069 J B	0.14 B
Vanadium	680	190000	580	18	21	20	20 B	13 B	13 B	15	22 B	18 B	12 B	20 B
Zinc	12000	190000	35000	15	15	120	59 B	19 B	52 B	60	14 B	16 B	26 B	9.3 B
Polychlorinated Biphenols														
Aroclor-1016	190	10000	5.1							0.019 U				
Aroclor-1221	0.68	27	0.83							0.019 U				
Aroclor-1232	0.54	10000	0.72							0.019 U				
Aroclor-1242	17	10000	0.95							0.019 U				
Aroclor-1248	67	10000	0.94							0.019 U				
Aroclor-1254	380	10000	0.97							0.019 U				
Aroclor-1260	630	190000	0.99							0.019 U				
Percent Solids														
Percent Solids														
Semi Volatile Organic Compound														
1,2,4-Trichlorobenzene	27	190	26	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.17 J	0.41 U	0.41 U	0.13 J
1,2-Dichlorobenzene	60	10000	930	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.59	0.41 U	0.41 U	0.6
1,3-Dichlorobenzene	61	10000		0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
1,4-Dichlorobenzene	10	230	11	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.099 J	0.41 U	0.41 U	0.11 J
2,4,5-Trichlorophenol	5900	190000	8200	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
2,4,6-Trichlorophenol	28	190000	82	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
2,4-Dichlorophenol	2	190000	250	0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
2,4-Dimethylphenol	190	10000	1600	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
2,4-Dinitrophenol	19	190000	160	2.1 U	2.2 U	2.1 U	2.1 U	1.9 U	2 U		2 U	2.1 U	2.1 U	2.1 U
2,4-Dinitrotoluene	0.88	190000	7.4	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
2,6-Dinitrotoluene	0.18	190000	1.5	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
2-Chloronaphthalene	17000	190000	6000	0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
2-Chlorophenol	4.4	10000	580	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
2-Methylnaphthalene	100	270	300	0.083 U	0.085 U	0.11	0.084 U	0.076 U	0.078 U		0.6	0.083 U	0.083 U	1.6
2-Methylphenol	490	190000	4100	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
2-Nitroaniline	0.044	4.5	800	2.1 U	2.2 U	2.1 U	2.1 U	1.9 U	2 U		2 U	2.1 U	2.1 U	2.1 U
2-Nitrophenol	78	190000		0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
3-& 4-Methylphenol [1]	49	190000	1600	0.41 U *	0.42 U *	0.41 U *	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
3,3'-Dichlorobenzidine	33	190000	5.1	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
3-Nitroaniline				2.1 U	2.2 U	2.1 U	2.1 U	1.9 U	2 U		2 U	2.1 U	2.1 U	2.1 U
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6	2.1 U	2.2 U	2.1 U	2.1 U	1.9 U	2 U		2 U	2.1 U	2.1 U	2.1 U
4-Bromophenyl phenyl ether				0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
4-Chloro-3-Methyl-Phenol	2000	190000	8200	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
4-Chloroaniline	1.8	190000	11	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
4-Chlorodiphenyl Ether				0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
4-Nitroaniline	14	190000	110	2.1 U	2.2 U	2.1 U	2.1 U	1.9 U	2 U		2 U	2.1 U	2.1 U	2.1 U
4-Nitrophenol	6	190000		2.1 U	2.2 U	2.1 U	2.1 U	1.9 U	2 U		2 U	2.1 U	2.1 U	2.1 U
Acenaphthene	4700	190000	4500	0.083 U	0.085 U	0.039 J	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.04 J
Acenaphthylene	6600	190000		0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Anthracene	350	190000	23000	0.083 U	0.085 U	0.014 J	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Benzo (A) Anthracene	340	190000	21	0.083 U	0.085 U	0.013 J	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.079 J
Benzo (a) Pyrene	46	190000	2.1	0.083 U	0.085 U	0.024 J	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Benzo (b) Fluoranthene	170	190000	21	0.083 U	0.085 U	0.024 J	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Benzo (g,h,i) Perylene	180	190000		0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Benzo (k) Fluoranthene	610	190000	210	0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41RAA16-CS-012 6 - 7 10/19/11	B41RAA16-CS-012 6 - 7 10/19/11	B41RAA16-CS-014 6 - 7 10/19/11	B41RAA17-CS-001 11.5 - 12.5 10/5/11	B41RAA3-CS-001 2 - 3 10/12/11	B41RAA3-CS-002 2 - 3 10/12/11	B4ND-CS-007 12 - 13 10/26/11	IWTP031-CS-001 11 - 12 10/5/11	IWTP031-CS-002 11 - 12 10/5/11	IWTP031-CS-003 11 - 12 10/5/11	IWTP031-CS-004 11 - 12 10/5/11
Bis(2-Chloroethoxy) Methane	29	10000	250	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
Bis(2-Chloroethyl) Ether	0.076	7.6	1	0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Bis(2-Chloroisopropyl) Ether	30	250	4700	0.083 U	0.085 U	0.083 U	0.084 U *	0.076 U	0.078 U		0.081 U *	0.083 U *	0.083 U *	0.083 U *
Bis(2-Ethylhexyl) Phthalate	130	10000	160	0.83 U	0.85 U	0.83 U	0.84 U	0.76 U	0.78 U		3.1	0.27 J	0.83 U	3.4
Butylbenzylphthalate	10000	10000	1200	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.36 J	0.41 U	0.41 U	0.38 J
Carbazole	89	190000		0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Chrysene	230	190000	2100	0.083 U	0.085 U	0.035 J	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.09
Dibenzo (a,h) Anthracene	270	190000	2.1	0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Dibenzofuran	250	190000	120	0.41 U	0.42 U	0.042 J	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
Diethylphthalate	7800	10000	66000	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
Dimethylphthalate				0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
Di-n-Butylphthalate	4000	10000	8200	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.33 J	0.41 U	0.41 U	2.3
Di-n-octylphthalate	10000	10000	820	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
Fluoranthene	3200	190000	3000	0.083 U	0.085 U	0.053 J	0.084 U	0.076 U	0.078 U		0.061 J	0.083 U	0.083 U	0.15
Fluorene	3800	190000	3000	0.083 U	0.085 U	0.031 J	0.084 U	0.076 U	0.078 U		0.054 J	0.083 U	0.083 U	0.075 J
Hexachlorobenzene	0.96	190000	0.96	0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Hexachlorobutadiene	42	10000	5.3	0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Hexachlorocyclopentadiene	91	10000	0.75	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
Hexachloroethane	0.56	270	8	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
Indeno (1,2,3-cd) Pyrene	18000	190000	21	0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Isophorone	10	10000	2400	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
Naphthalene	25	77	8.6	0.083 U	0.085 U	0.1	0.084 U	0.076 U	0.078 U		0.37	0.083 U	0.083 U	0.98
Nitrobenzene	0.63	63	22	0.83 U	0.85 U	0.83 U	0.84 U	0.76 U	0.78 U		0.81 U	0.83 U	0.83 U	0.83 U
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33	0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
N-Nitrosodiphenylamine	15	990	470	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
Pentachlorophenol	5	190000	4	0.41 U	0.42 U	0.41 U	0.41 U	0.37 U	0.38 U		0.4 U	0.41 U	0.41 U	0.41 U
Phenanthrene	10000	190000		0.083 U	0.085 U	0.074 J	0.084 U	0.076 U	0.078 U		0.21	0.083 U	0.083 U	0.32
Phenol	200	18000	25000	0.083 U	0.085 U	0.083 U	0.084 U	0.076 U	0.078 U		0.081 U	0.083 U	0.083 U	0.083 U
Pyrene	2200	190000	2300	0.083 U	0.085 U	0.045 J	0.084 U	0.076 U	0.078 U		0.063 J	0.083 U	0.083 U	0.21
Total Solids														
Percent Solids														
Volatile Organic Compound														
1,1,1,2-Tetrachloroethane	18	340	8.8	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
1,1,1-Trichloroethane	20	10000	3600	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	120	7.5 U	0.38 U	0.0057 U	140 U
1,1,2,2-Tetrachloroethane	0.43	44	2.7	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
1,1,2-Trichloroethane	0.5	18	0.63	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
1,1-Dichloroethane	16	1600	16	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
1,1-Dichloroethene	0.7	10000	100	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
1,2,4-Trimethylbenzene	300	5400	180											
1,2-Dibromoethane	0.005	4.2	0.16	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
1,2-Dichloroethane	0.5	98	2	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
1,2-Dichloropropane	0.5	0.69	6.6	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
1,3,5-Trimethylbenzene	93	5400	150											
1,4-Dioxane	2.7	510	24	1.1 U	1.1 U	1.1 U	57 U	1 U	0.95 U	9800 U	1500 U	76 U	1.1 U	28000 U
2-Butanone	400	10000	19000	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
2-Hexanone	26	2700	130	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
4-Methyl-2-Pentanone	780	10000	14000	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Acetone	8800	10000	110000	0.023 U	0.022 U	0.011 J	1.1 U *	0.02 U	0.019 U	200 U	30 U *	1.5 U *	0.014 J	550 U *
Acrylonitrile	0.37	37	1.1	0.11 U	0.11 U	0.11 U	5.7 U	0.1 U	0.095 U	980 U	150 U	7.6 U	0.11 U	2800 U
Benzene	0.5	330	5.1	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Bromochloromethane	9	3600	63	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Bromodichloromethane	8	69	1.3	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Bromoform	8	2300	86	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Bromomethane	1	460	3	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Carbon Disulfide	620	10000	350	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Carbon Tetrachloride	0.5	430	2.9	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Chlorobenzene	10	4500	130	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Chlorodibromomethane	8	10000	39	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Chloroethane	8800	10000	2300	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Chloroform	8	110	1.4	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Chloromethane	3	1400	46	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
cis-1,2-Dichloroethene	7	10000	230	0.0023 J	0.0047 J	0.097	0.29 U	0.005 U	0.0021 J	49 U	7.5 U	0.53	0.026	28 J
cis-1,3-Dichloropropene	2.7	640	8.2	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Ethylbenzene	70	1000	25	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Isopropylbenzene	2500	10000	990											
Methyl tert-butyl ether	2	9800	210	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Methylene chloride	0.5	10000	320	0.0057 U	0.0055 U	0.0057 U	0.12 J	0.005 U	0.0047 U	49 U	7.5 U	0.17 J	0.0057 U	140 U

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	B41RAA16-CS-012 6 - 7 10/19/11	B41RAA16-CS-012 6 - 7 10/19/11	B41RAA16-CS-014 6 - 7 10/19/11	B41RAA17-CS-001 11.5 - 12.5 10/5/11	B41RAA3-CS-001 2 - 3 10/12/11	B41RAA3-CS-002 2 - 3 10/12/11	B4ND-CS-007 12 - 13 10/26/11	IWTP031-CS-001 11 - 12 10/5/11	IWTP031-CS-002 11 - 12 10/5/11	IWTP031-CS-003 11 - 12 10/5/11	IWTP031-CS-004 11 - 12 10/5/11
Styrene	24	10000	3500	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Tetrachloroethene	0.5	3600	39	0.0013 J	0.0031 J	0.0057 U	0.32	0.0053	0.012	420	56	1.3	0.00085 J	2100
Toluene	100	10000	4700	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
trans-1,2-Dichloroethene	10	10000	30	0.0057 U	0.0055 U	0.015	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
trans-1,3-Dichloropropene [2]	2.7	640	8.2	0.0057 U	0.0055 U	0.0057 U	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0057 U	140 U
Trichloroethene	0.5	180	1.9	0.0057 U	0.0017 J	0.0057 U	0.29 U	0.0026 J	0.0082	940	3.7 J	0.38 U	0.0057 U	97 J
Vinyl Chloride	0.2	290	1.7	0.0057 U	0.0055 U	0.56	0.29 U	0.005 U	0.0047 U	49 U	7.5 U	0.38 U	0.0014 J	140 U
Xylenes (Total)	1000	9100	250	0.017 U	0.017 U	0.017 U	0.86 U	0.015 U	0.014 U	150 U	22 U	1.1 U	0.017 U	410 U
Naphthalene	25	77	8.6											

Notes:
Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".
J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.
B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	IWTP031-CS-005 11 - 12 10/5/11	IWTP031-CS-006 11 - 12 10/5/11	IWTP037-CS-001 11 - 12 10/4/11	IWTP037-CS-002 11 - 12 10/4/11	IWTP037-CS-003 11 - 12 10/4/11	IWTP037-CS-004 11 - 12 10/4/11	IWTP040-CS-001 11 - 12 10/4/11	IWTP040-CS-002 11 - 12 10/4/11
Cyanide, Free											
Cyanide, Free	200	190000	15	0.051 U	0.05 U	0.049 U	0.046 U	0.054 U	0.053 U	0.048 U	0.048 U
Cyanide, Total											
Cyanide, Total	200	190000	15	0.39 J	0.63 U	0.18 J	1.6	0.38 J	0.15 J	0.61 U	0.6 U
METAL											
Antimony	27	190000	47	0.16 J B	0.2 J B	0.084 J B	0.059 J B	0.27 B	0.22 J B	0.088 J B	0.18 J B
Arsenic	29	190000	3	4.7	3.8	3.5	4.5	6.1	7.7	10	4.8
Barium	8200	190000	22000	47 B	39 B	48 B	66 B	45 B	45 B	51 B	78 B
Beryllium	320	190000	230	0.59	0.88	0.37	0.35	1	1.1	0.44	0.48
Cadmium	38	190000	10	3.1	1.7	0.11 J	0.12	24	1.1	1.8	0.7
Chromium	190	140000	6.3	32 B	18 B	15 B	13 B	66 B	17 B	28 B	18 B
Copper	43000	190000	4700	5.8	11	5.9 B	4.2 B	33 B	11 B	10 B	5.5 B
Hexavalent Chromium	190	140000	6.3	0.51	0.23 J	0.22 J	0.27 J	1.6	0.51 J	0.41 J	0.72
Lead	450	190000	800	11	22	10 B	9.4 B	33 B	20 B	12 B	12 B
Mercury	10	190000	4.6	0.035 J	0.043	0.03 J	0.037	0.043 U	0.053	0.052	0.037 U
Nickel	650	190000	2200	9.7 B	12 B	5.7	4.8	32	15	17	9.6
Selenium	26	190000	580	0.22 J	0.12 J	0.39 J	0.44 J	1.7	0.63	0.47 J	0.52 J
Silver	84	190000	580	0.028 J	0.046 J	0.029 J	0.024 J	0.045 J	0.036 J	0.034 J	0.031 J
Thallium	14	190000	1.2	0.11 J B	0.11 J B	0.15	0.15	0.12	0.13	0.1 J	0.16
Vanadium	680	190000	580	25 B	20 B	21 B	21 B	13 B	18 B	26 B	24 B
Zinc	12000	190000	35000	18 B	26 B	12	12	65	23	22	23
Polychlorinated Biphenols											
Aroclor-1016	190	10000	5.1								
Aroclor-1221	0.68	27	0.83								
Aroclor-1232	0.54	10000	0.72								
Aroclor-1242	17	10000	0.95								
Aroclor-1248	67	10000	0.94								
Aroclor-1254	380	10000	0.97								
Aroclor-1260	630	190000	0.99								
Percent Solids											
Percent Solids											
Semi Volatile Organic Compound											
1,2,4-Trichlorobenzene	27	190	26	0.42 U	0.099 J	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
1,2-Dichlorobenzene	60	10000	930	0.047 J	0.44	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
1,3-Dichlorobenzene	61	10000		0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
1,4-Dichlorobenzene	10	230	11	0.42 U	0.07 J	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
2,4,5-Trichlorophenol	5900	190000	8200	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
2,4,6-Trichlorophenol	28	190000	82	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
2,4-Dichlorophenol	2	190000	250	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
2,4-Dimethylphenol	190	10000	1600	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
2,4-Dinitrophenol	19	190000	160	2.2 U	2.1 U	2.1 U	2 U	2.3 U	2.2 U	2 U	2 U
2,4-Dinitrotoluene	0.88	190000	7.4	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
2,6-Dinitrotoluene	0.18	190000	1.5	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
2-Chloronaphthalene	17000	190000	6000	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
2-Chlorophenol	4.4	10000	580	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
2-Methylnaphthalene	100	270	300	0.045 J	0.34	0.082 U	0.078 U	0.09 U	0.088 U	0.07 J	0.08 U
2-Methylphenol	490	190000	4100	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
2-Nitroaniline	0.044	4.5	800	2.2 U	2.1 U	2.1 U	2 U	2.3 U	2.2 U	2 U	2 U
2-Nitrophenol	78	190000		0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
3-& 4-Methylphenol [1]	49	190000	1600	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
3,3'-Dichlorobenzidine	33	190000	5.1	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
3-Nitroaniline				2.2 U	2.1 U	2.1 U	2 U	2.3 U	2.2 U	2 U	2 U
4,6-Dinitro-2-Methylphenol	0.78	190000	6.6	2.2 U	2.1 U	2.1 U	2 U	2.3 U	2.2 U	2 U	2 U
4-Bromophenyl phenyl ether				0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
4-Chloro-3-Methyl-Phenol	2000	190000	8200	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
4-Chloroaniline	1.8	190000	11	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
4-Chlorodiphenyl Ether				0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
4-Nitroaniline	14	190000	110	2.2 U	2.1 U	2.1 U	2 U	2.3 U	2.2 U	2 U	2 U
4-Nitrophenol	6	190000		2.2 U	2.1 U	2.1 U	2 U	2.3 U	2.2 U	2 U	2 U
Acenaphthene	4700	190000	4500	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Acenaphthylene	6600	190000		0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Anthracene	350	190000	23000	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Benzo (A) Anthracene	340	190000	21	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Benzo (a) Pyrene	46	190000	2.1	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Benzo (b) Fluoranthene	170	190000	21	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Benzo (g,h,i) Perylene	180	190000		0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Benzo (k) Fluoranthene	610	190000	210	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	IWTP031-CS-005 11 - 12 10/5/11	IWTP031-CS-006 11 - 12 10/5/11	IWTP037-CS-001 11 - 12 10/4/11	IWTP037-CS-002 11 - 12 10/4/11	IWTP037-CS-003 11 - 12 10/4/11	IWTP037-CS-004 11 - 12 10/4/11	IWTP040-CS-001 11 - 12 10/4/11	IWTP040-CS-002 11 - 12 10/4/11
Bis(2-Chloroethoxy) Methane	29	10000	250	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
Bis(2-Chloroethyl) Ether	0.076	7.6	1	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Bis(2-Chloroisopropyl) Ether	30	250	4700	0.085 U *	0.084 U *	0.082 U *	0.078 U *	0.09 U *	0.088 U *	0.08 U *	0.08 U *
Bis(2-Ethylhexyl) Phthalate	130	10000	160	0.52 J	2.3	0.82 U	0.78 U	0.11 J	0.88 U	0.63 J	0.8 U
Butylbenzylphthalate	10000	10000	1200	0.42 U	0.19 J	0.4 U	0.38 U	0.44 U	0.43 U	0.097 J	0.39 U
Carbazole	89	190000		0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Chrysene	230	190000	2100	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Dibenzo (a,h) Anthracene	270	190000	2.1	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Dibenzofuran	250	190000	120	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
Diethylphthalate	7800	10000	66000	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
Dimethylphthalate				0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
Di-n-Butylphthalate	4000	10000	8200	0.42 U	0.23 J	0.4 U	0.38 U	0.44 U	0.43 U	0.059 J	0.39 U
Di-n-octylphthalate	10000	10000	820	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
Fluoranthene	3200	190000	3000	0.085 U	0.021 J	0.082 U	0.078 U	0.09 U	0.088 U	0.0093 J	0.08 U
Fluorene	3800	190000	3000	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Hexachlorobenzene	0.96	190000	0.96	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Hexachlorobutadiene	42	10000	5.3	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Hexachlorocyclopentadiene	91	10000	0.75	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
Hexachloroethane	0.56	270	8	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
Indeno (1,2,3-cd) Pyrene	18000	190000	21	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Isophorone	10	10000	2400	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
Naphthalene	25	77	8.6	0.029 J	0.19	0.082 U	0.078 U	0.09 U	0.088 U	0.032 J	0.08 U
Nitrobenzene	0.63	63	22	0.85 U	0.84 U	0.82 U	0.78 U	0.9 U	0.88 U	0.8 U	0.8 U
N-Nitrosodi-N-Propylamine	0.013	1.3	0.33	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
N-Nitrosodiphenylamine	15	990	470	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
Pentachlorophenol	5	190000	4	0.42 U	0.41 U	0.4 U	0.38 U	0.44 U	0.43 U	0.39 U	0.39 U
Phenanthrene	10000	190000		0.023 J	0.11	0.082 U	0.078 U	0.09 U	0.088 U	0.035 J	0.08 U
Phenol	200	18000	25000	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.08 U	0.08 U
Pyrene	2200	190000	2300	0.085 U	0.084 U	0.082 U	0.078 U	0.09 U	0.088 U	0.017 J	0.08 U
Total Solids											
Percent Solids											
Volatile Organic Compound											
1,1,1,2-Tetrachloroethane	18	340	8.8	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
1,1,1-Trichloroethane	20	10000	3600	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
1,1,2,2-Tetrachloroethane	0.43	44	2.7	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
1,1,2-Trichloroethane	0.5	18	0.63	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
1,1-Dichloroethane	16	1600	16	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
1,1-Dichloroethene	0.7	10000	100	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
1,2,4-Trimethylbenzene	300	5400	180								
1,2-Dibromoethane	0.005	4.2	0.16	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
1,2-Dichloroethane	0.5	98	2	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
1,2-Dichloropropane	0.5	0.69	6.6	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
1,3,5-Trimethylbenzene	93	5400	150								
1,4-Dioxane	2.7	510	24	280 U	2700 U	61 U	58 U	1.2 U	62 U	590 U	58 U
2-Butanone	400	10000	19000	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
2-Hexanone	26	2700	130	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
4-Methyl-2-Pentanone	780	10000	14000	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Acetone	8800	10000	110000	5.6 U *	54 U *	1.2 U	1.2 U	0.024 U	1.2 U	12 U	1.2 U
Acrylonitrile	0.37	37	1.1	28 U	270 U	6.1 U	5.8 U	0.12 U	6.2 U	59 U	5.8 U
Benzene	0.5	330	5.1	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Bromochloromethane	9	3600	63	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Bromodichloromethane	8	69	1.3	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Bromoform	8	2300	86	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Bromomethane	1	460	3	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Carbon Disulfide	620	10000	350	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Carbon Tetrachloride	0.5	430	2.9	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Chlorobenzene	10	4500	130	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Chlorodibromomethane	8	10000	39	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Chloroethane	8800	10000	2300	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Chloroform	8	110	1.4	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Chloromethane	3	1400	46	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
cis-1,2-Dichloroethene	7	10000	230	13	14 U	1	0.29 U	0.15	0.85	0.58 J	1.9
cis-1,3-Dichloropropene	2.7	640	8.2	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Ethylbenzene	70	1000	25	1.4 U	2.9 J	0.31 U	0.29 U	0.0014 J	0.31 U	3 U	0.29 U
Isopropylbenzene	2500	10000	990								
Methyl tert-butyl ether	2	9800	210	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Methylene chloride	0.5	10000	320	1.4 U	14 U	0.086 J	0.12 J	0.006 U	0.16 J	3 U	0.16 J

TABLE 4.1-4
Soil Data Collected After Soils Risk Assessment - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 2 - 15 feet (mg/kg)	RSL Industrial Soil (mg/kg)	IWTP031-CS-005 11 - 12 10/5/11	IWTP031-CS-006 11 - 12 10/5/11	IWTP037-CS-001 11 - 12 10/4/11	IWTP037-CS-002 11 - 12 10/4/11	IWTP037-CS-003 11 - 12 10/4/11	IWTP037-CS-004 11 - 12 10/4/11	IWTP040-CS-001 11 - 12 10/4/11	IWTP040-CS-002 11 - 12 10/4/11
Styrene	24	10000	3500	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Tetrachloroethene	0.5	3600	39	25	310	0.34	0.26 J	0.12	0.28 J	33	0.35
Toluene	100	10000	4700	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
trans-1,2-Dichloroethene	10	10000	30	1.4 U	14 U	0.31 U	0.29 U	0.00082 J	0.31 U	3 U	0.29 U
trans-1,3-Dichloropropene [2]	2.7	640	8.2	1.4 U	14 U	0.31 U	0.29 U	0.006 U	0.31 U	3 U	0.29 U
Trichloroethene	0.5	180	1.9	4.5	19	0.2 J	0.29 U	0.052	0.15 J	1.7 J	0.19 J
Vinyl Chloride	0.2	290	1.7	1.4 U	14 U	0.31 U	0.29 U	0.015	0.31 U	3 U	0.29 U
Xylenes (Total)	1000	9100	250	4.2 U	41 U	0.92 U	0.88 U	0.018 U	0.93 U	8.9 U	0.87 U
Naphthalene	25	77	8.6								

Notes:
Blank Cells - Substance not analyzed
GW - Groundwater
mg/kg - Milligrams per kilogram
MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".
J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.
B - Blank contamination. Analyte detected in the associated method blank.
[1] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[2] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-5
Screening of Soil Data - East Campus 0 to 2 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	Is Post-Soils RA Maximum > Soils RA Maximum?	Attainment Under SHS	Attainment Under SSS
1,1,1,2-Tetrachloroethane	18	ND	NA	NA	No	NA		18	ND	NA	NA	No	8.8			✓	
1,1,1-Trichloroethane	20	50.9	NTT-SG25a	12/21/99	Yes	3800	No	20	ND	NA	NA	No	3600		No		✓
1,1,2,2-Tetrachloroethane	0.43	ND	NA	NA	No	NA		0.43	ND	NA	NA	No	2.7			✓	
1,1,2-Trichloroethane	0.5	ND	NA	NA	No	NA		0.5	ND	NA	NA	No	0.63			✓	
1,1-Dichloroethane	16	1.16	NETT-11	3/30/87	No	NA		16	ND	NA	NA	No	16		No	✓	
1,1-Dichloroethene	0.7	0.05	NETT-10	3/30/87	No	NA		0.7	ND	NA	NA	No	100		No	✓	
1,2,4-Trichlorobenzene	27	ND	NA	NA	No	NA		27	0.027	HD-NPA-CS-012-1.5/2-0	8/4/10	No	26		Yes	✓	
1,2,4-Trimethylbenzene	—	—	—	—	—	—		300	—	—	—	—	180			✓	
1,2-Dibromo-3-Chloropropane	0.02	ND	NA	NA	No	NA		0.02	—	—	—	—	0.064			✓	
1,2-Dibromoethane	0.005	ND	NA	NA	No	NA		0.005	ND	NA	NA	No	0.16			✓	
1,2-Dichlorobenzene	60	ND	NA	NA	No	NA		60	ND	NA	NA	No	930			✓	
1,2-Dichloroethane	0.5	ND	NA	NA	No	NA		0.5	ND	NA	NA	No	2			✓	
1,2-Dichloroethene [1]	7	ND	NA	NA	No	NA		7	—	—	—	—	37			✓	
1,2-Dichloropropane	0.5	ND	NA	NA	No	NA		0.5	ND	NA	NA	No	6.6			✓	
1,3,5-Trimethylbenzene	—	—	—	—	—	—		93	—	—	—	—	150			✓	
1,3-Dichlorobenzene	61	ND	NA	NA	No	NA		61	ND	NA	NA	No	NA			✓	
1,3-Dichloropropene	2.6	ND	NA	NA	No	NA		2.7	ND	NA	NA	No	8.2			✓	
1,4-Dichlorobenzene	10	ND	NA	NA	No	NA		10	ND	NA	NA	No	11			✓	
1,4-Dioxane	3.2	ND	NA	NA	No	NA		2.7	1	HD-SPBA-SB-007-0.5/1.0-0 HD-SPBA-SB-009-0.5/1.0-0 HD-SPBA-SB-010-0.5/1.0-0	3/28/17 3/29/17 3/30/17	No	24		Yes	✓	
2,4,5-Trichlorophenol	6100	ND	NA	NA	No	NA		5900	ND	NA	NA	No	8200			✓	
2,4,6-Trichlorophenol	29	ND	NA	NA	No	NA		28	ND	NA	NA	No	82			✓	
2,4-Dichlorophenol	2	ND	NA	NA	No	NA		2	ND	NA	NA	No	250			✓	
2,4-Dimethylphenol	200	ND	NA	NA	No	NA		190	ND	NA	NA	No	1600			✓	
2,4-Dinitrophenol	20	ND	NA	NA	No	NA		19	ND	NA	NA	No	160			✓	
2,4-Dinitrotoluene	0.84	ND	NA	NA	No	NA		0.88	ND	NA	NA	No	7.4			✓	
2,6-Dinitrotoluene	10	ND	NA	NA	No	NA		0.18	ND	NA	NA	No	1.5			✓	
2-Butanone	400	0.0365	HD Fire Pond A4 (0-1) Dup	6/16/03	No	NA		400	ND	NA	NA	No	19000		No	✓	
2-Chloroethyl Vinyl Ether	NA	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
2-Chloronaphthalene	18000	ND	NA	NA	No	NA		17000	ND	NA	NA	No	6000			✓	
2-Chlorophenol	4.4	ND	NA	NA	No	NA		4.4	ND	NA	NA	No	580			✓	
2-Hexanone	4.4	ND	NA	NA	No	NA		26	ND	NA	NA	No	130			✓	
2-Methylnaphthalene	1600	0.058	HD-FCSA-SB-001-02-0	5/9/07	No	NA		100	0.84	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	300		Yes	✓	
2-Methylphenol	510	ND	NA	NA	No	NA		490	ND	NA	NA	No	4100			✓	
2-Nitroaniline	31	ND	NA	NA	No	NA		0.044	ND	NA	NA	No	800			✓	
2-Nitrophenol	82	ND	NA	NA	No	NA		78	ND	NA	NA	No	NA			✓	
3,3'-Dichlorobenzidine	32	ND	NA	NA	No	NA		33	ND	NA	NA	No	5.1			✓	
3/4-Methylphenol [2]	51	88	PSWS-1	3/22/00	Yes	310	No	49	ND	NA	NA	No	1600		No		✓
3-Nitroaniline	3.1	ND	NA	NA	No	NA		NA	ND	NA	NA	No	NA			✓	
4,4'-DDD	120	ND	NA	NA	No	NA		120	—	—	—	—	9.6			✓	
4,4'-DDE	170	ND	NA	NA	No	NA		170	—	—	—	—	9.3			✓	
4,4'-DDT	230	ND	NA	NA	No	NA		330	—	—	—	—	8.5			✓	
4,6-Dinitro-2-Methylphenol	1	ND	NA	NA	No	NA		0.78	ND	NA	NA	No	6.6			✓	
4-Bromophenyl phenyl ether	NA	ND	NA	NA	No	NA		NA	ND	NA	NA	No	NA			✓	
4-Chloro-3-Methyl-Phenol	110	ND	NA	NA	No	NA		2000	ND	NA	NA	No	8200			✓	
4-Chloroaniline	1.6	ND	NA	NA	No	NA		1.8	ND	NA	NA	No	11			✓	
4-Chlorodiphenyl Ether	NA	ND	NA	NA	No	NA		NA	ND	NA	NA	No	NA			✓	
4-Methyl-2-Pentanone	820	ND	NA	NA	No	NA		780	ND	NA	NA	No	14000			✓	
4-Methylphenol	—	—	—	—	—	—		49	ND	NA	NA	No	1600			✓	
4-Nitroaniline	13	ND	NA	NA	No	NA		14	ND	NA	NA	No	110			✓	
4-Nitrophenol	6	ND	NA	NA	No	NA		6	ND	NA	NA	No	NA			✓	

TABLE 4.1-5
Screening of Soil Data - East Campus 0 to 2 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	Is Post-Soils RA Maximum > Soils RA Maximum?	Attainment Under SHS	Attainment Under SSS
Acenaphthene	4700	ND	NA	NA	No	NA		4700	1.3	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	4500		Yes	✓	
Acenaphthylene	6900	ND	NA	NA	No	NA		6600	0.48	HD-NPA-CS-001-1/2-0	8/4/10	No	NA		Yes	✓	
Acetone	9200	0.196	Fire Pond 1 (0-1)	6/13/03	No	NA		8800	0.015	HD-NPA-CS-012-1.5/2-0	8/4/10	No	110000		No	✓	
Acrolein	0.018	ND	NA	NA	No	NA		0.018	—	—	—	—	0.06			✓	
Acrylonitrile	0.37	ND	NA	NA	No	NA		0.37	ND	NA	NA	No	1.1			✓	
Aldrin	1.8	ND	NA	NA	No	NA		1.9	—	—	—	—	0.18			✓	
Alpha-BHC	0.19	ND	NA	NA	No	NA		0.2	—	—	—	—	0.36			✓	
Alpha-Endosulfan [3]	260	ND	NA	NA	No	NA		260	—	—	—	—	700			✓	
Aluminum	190000	21900	BG-12	6/3/98	No	NA		NA	—	—	—	—	110000		No	✓	
Anthracene	350	ND	NA	NA	No	NA		350	6.1	HD-NPA-CS-012-1.5/2-0	8/4/10	No	23000		Yes	✓	
Antimony	27	3	HD Fire Pond A4 (0-1)	6/16/03	No	NA		27	0.38	HD-NPA-CS-001-1/2-0	8/4/10	No	47		No	✓	
Aroclor-1016	200	ND	NA	NA	No	NA		190	ND	NA	NA	No	5.1			✓	
Aroclor-1221	0.63	ND	NA	NA	No	NA		0.68	ND	NA	NA	No	0.83			✓	
Aroclor-1232	0.5	ND	NA	NA	No	NA		0.54	ND	NA	NA	No	0.72			✓	
Aroclor-1242	16	ND	NA	NA	No	NA		17	ND	NA	NA	No	0.95			✓	
Aroclor-1248	40	ND	NA	NA	No	NA		67	ND	NA	NA	No	0.94			✓	
Aroclor-1254	40	5.5	SETT 10-1-01	10/1/01	No	NA		380	1.9	HD-NPA-CS-001-1/2-0	8/4/10	No	0.97		No	✓	
Aroclor-1260	40	0.0752	WP-SG7a	12/22/99	No	NA		630	4.9	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	0.99		Yes	✓	
Arsenic	29	18.1	PSWS-2	6/8/98	No	NA		29	22	HD-B51H-CS-011-1/1.5-0	8/24/11	No	3		Yes	✓	
Barium	8200	162	BG-11	6/3/98	No	NA		8200	140	HD-B51H-CS-001-1/1.5-0	8/24/11	No	22000		No	✓	
Benzene	0.5	0.018	SE Corner 11-15-01	11/15/01	No	NA		0.5	ND	NA	NA	No	5.1		No	✓	
Benzo(a)anthracene	110	0.022	HD-B51-TP-2A-1.5/2-0	1/8/09	No	NA		340	3	HD-NPA-CS-012-1.5/2-0	8/4/10	No	21		Yes	✓	
Benzo(a)pyrene	11	ND	NA	NA	No	NA		46	1.4	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	2.1		Yes	✓	
Benzo(b)fluoranthene	110	ND	NA	NA	No	NA		170	2.9	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	21		Yes	✓	
Benzo(g,h,i)perylene	180	ND	NA	NA	No	NA		180	1	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	NA		Yes	✓	
Benzo(k)fluoranthene	610	ND	NA	NA	No	NA		610	ND	NA	NA	No	210			✓	
Beryllium	320	2.3	PSWS-2	6/8/98	No	NA		320	0.73	HD-NPA-CS-012-1.5/2-0	8/4/10	No	230		No	✓	
Beta-BHC	0.82	ND	NA	NA	No	NA		0.88	—	—	—	—	1.3			✓	
Beta-Endosulfan [3]	260	ND	NA	NA	No	NA		260	—	—	—	—	700			✓	
Bis(2-Chloroethoxy) Methane	31	ND	NA	NA	No	NA		29	ND	NA	NA	No	250			✓	
Bis(2-Chloroethyl) Ether	0.076	ND	NA	NA	No	NA		0.076	ND	NA	NA	No	1			✓	
Bis(2-Chloroisopropyl) Ether	30	ND	NA	NA	No	NA		30	—	—	—	—	4700			✓	
Bis(2-ethylhexyl) phthalate	130	ND	NA	NA	No	NA		130	0.21	HD-NPA-SB-018-0.5/1.5-0	7/16/10	No	160		Yes	✓	
Bromochloromethane	9	ND	NA	NA	No	NA		9	ND	NA	NA	No	63			✓	
Bromodichloromethane	8	ND	NA	NA	No	NA		8	ND	NA	NA	No	1.3			✓	
Bromoform	8	ND	NA	NA	No	NA		8	ND	NA	NA	No	86			✓	
Bromomethane	1	ND	NA	NA	No	NA		1	ND	NA	NA	No	3			✓	
Butylbenzylphthalate	10000	0.03	HD-B51-TP-2G-1.5/2-0	1/8/09	No	NA		10000	ND	NA	NA	No	1200		No	✓	
Cadmium	38	5.3	PSWS-2	6/8/98	No	NA		38	0.83	HD-NPA-CS-001-1/2-0	8/4/10	No	10		No	✓	
Calcium*	NA	26400	PSWS-2	6/8/98	No	NA		NA	—	—	—	—	NA		No	✓	
Carbazole	83	ND	NA	NA	No	NA		89	0.21	HD-NPA-CS-012-1.5/2-0	8/4/10	No	NA		Yes	✓	
Carbon Disulfide	620	0.0156	HD Fire Pond A3 (0-1)	6/16/03	No	NA		620	ND	NA	NA	No	350		No	✓	
Carbon Tetrachloride	0.5	ND	NA	NA	No	NA		0.5	ND	NA	NA	No	2.9			✓	
Chlordane [4]	49	ND	NA	NA	No	NA		49	—	—	—	—	7.7			✓	
Chlorobenzene	10	ND	NA	NA	No	NA		10	ND	NA	NA	No	130			✓	
Chlorodibromomethane	8	ND	NA	NA	No	NA		8	ND	NA	NA	No	39			✓	
Chloroethane	90	0.44	NETT-11	3/30/87	No	NA		8800	ND	NA	NA	No	2300		No	✓	
Chloroform	8	0.0002	HD Fire Pond B4 (0-1)	6/16/03	No	NA		8	ND	NA	NA	No	1.4		No	✓	
Chloromethane	3	ND	NA	NA	No	NA		3	ND	NA	NA	No	46			✓	
Chromium	190	139	HD-ELF-QC-DUP5-02-1	4/26/07	No	NA		190	130	HD-B51H-CS-009-1/1.5-0	8/24/11	No	6.3		No	✓	
Chrysene	230	ND	NA	NA	No	NA		230	2.9	HD-NPA-CS-012-1.5/2-0	8/4/10	No	2100		Yes	✓	
cis-1,2-Dichloroethene	7	0.53	HD-NETT-SB-042-02-0	4/4/07	No	NA		7	0.33	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	37		No	✓	

TABLE 4.1-5
Screening of Soil Data - East Campus 0 to 2 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	Is Post-Soils RA Maximum > Soils RA Maximum?	Attainment Under SHS	Attainment Under SSS
cis-1,3-Dichloropropene	2.6	ND	NA	NA	No	NA		2.7	ND	NA	NA	No	8.2			✓	
Cobalt	140	19.5	BG-12	6/3/98	No	NA		130	—	—	—	—	35		No	✓	
Copper	43000	173	HD-ELF-QC-DUP5-02-1	4/26/07	No	NA		43000	66.1	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	4700		No	✓	
Cyanide, Free	200	2.8	HD-NETT-SB-002-02-0	4/6/07	No	NA		200	ND	NA	NA	No	15		No	✓	
Cyanide, Total	200	23	HD-NETT-SB-047-02-0	4/4/07	No	NA		200	ND	NA	NA	No	15		No	✓	
Delta-BHC	NA	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
Dibenzo(a,h)anthracene	11	ND	NA	NA	No	NA		270	0.15	HD-NPA-CS-012-1.5/2-0	8/4/10	No	2.1		Yes	✓	
Dibenzofuran	260	0.015	HD-FCSA-SB-001-02-0	5/9/07	No	NA		250	0.49	HD-NPA-CS-012-1.5/2-0	8/4/10	No	120		Yes	✓	
Dieldrin	0.44	ND	NA	NA	No	NA		0.47	—	—	—	—	0.14			✓	
Diethylphthalate	8200	ND	NA	NA	No	NA		7800	ND	NA	NA	No	66000			✓	
Dimethylphthalate	NA	ND	NA	NA	No	NA		NA	ND	NA	NA	No	NA			✓	
Di-n-Butylphthalate	4100	ND	NA	NA	No	NA		4000	ND	NA	NA	No	8200			✓	
Di-n-octylphthalate	10000	0.498	NTT-SG25a	12/21/99	No	NA		10000	ND	NA	NA	No	820		No	✓	
Endosulfan Sulfate	70	ND	NA	NA	No	NA		70	—	—	—	—	490			✓	
Endrin	5.5	ND	NA	NA	No	NA		5.5	—	—	—	—	25			✓	
Endrin Aldehyde	NA	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
Ethylbenzene	70	0.8	NETT-7	3/30/87	No	NA		70	0.24	HD-NPA-SB-018-0.5/1.5-0	7/16/10	No	25		No	✓	
Fluoranthene	3200	0.028	HD-B51-TP-2A-1.5/2-0	1/8/09	No	NA		3200	14	HD-NPA-CS-012-1.5/2-0	8/4/10	No	3000		Yes	✓	
Fluorene	3800	ND	NA	NA	No	NA		3800	1.6	HD-NPA-CS-012-1.5/2-0	8/4/10	No	3000		Yes	✓	
Heptachlor	0.68	ND	NA	NA	No	NA		0.68	—	—	—	—	0.63			✓	
Heptachlor Epoxide	1.1	ND	NA	NA	No	NA		1.1	—	—	—	—	0.33			✓	
Hexachlorobenzene	0.96	ND	NA	NA	No	NA		0.96	ND	NA	NA	No	0.96			✓	
Hexachlorobutadiene	39	ND	NA	NA	No	NA		42	ND	NA	NA	No	5.3			✓	
Hexachlorocyclopentadiene	91	ND	NA	NA	No	NA		91	ND	NA	NA	No	0.75			✓	
Hexachloroethane	0.56	ND	NA	NA	No	NA		0.56	ND	NA	NA	No	8			✓	
Hexavalent Chromium	190	1.59	NTT-SG12a	12/16/99	No	NA		190	130	HD-B51H-CS-009-1/1.5-0	8/24/11	No	6.3		Yes	✓	
Indeno(1,2,3-cd)pyrene	110	ND	NA	NA	No	NA		18000	0.55	HD-NPA-CS-001-1/2-0	8/4/10	No	21		Yes	✓	
Iron	190000	90200	PSWS-2	6/8/98	No	NA		NA	—	—	—	—	82000		No	✓	
Isophorone	10	ND	NA	NA	No	NA		10	ND	NA	NA	No	2400			✓	
Isopropylbenzene	—	—	—	—	—	—		2500	—	—	—	—	990			✓	
Lead	450	218	BG-12	6/3/98	No	NA		450	40.7	HD-NPA-CS-001-1/2-0	8/4/10	No	800		No	✓	
Lindane (Gamma-BHC)	0.072	ND	NA	NA	No	NA		0.072	—	—	—	—	1			✓	
m,p-Xylene [5]	1000	0.0017	HD Fire Pond A3 (0-1)	6/16/03	No	NA		1000	0.83	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	250		Yes	✓	
Magnesium*	NA	10100	PSWS-2	6/8/98	No	NA		NA	—	—	—	—	NA		No	✓	
Manganese	2000	1600	PSWS-2	6/8/98	No	NA		2000	—	—	—	—	2600		No	✓	
Mercury	10	1.7	OWCA-SP-1	4/27/95	No	NA		10	0.15	HD-NPA-CS-001-1/2-0	8/4/10	No	4.6		No	✓	
Methyl tert-butyl ether	2	ND	NA	NA	No	NA		2	ND	NA	NA	No	210			✓	
Methylene chloride	0.5	0.024	HD-NETT-SB-013-02-0	4/19/07	No	NA		0.5	0.005	HD-NPA-CS-012-1.5/2-0	8/4/10	No	320		No	✓	
Naphthalene	25	0.034	HD-FCSA-SB-001-02-0	5/9/07	No	NA		25	1.4	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	8.6		Yes	✓	
Nickel	650	112	WP-SG7a	12/22/99	No	NA		650	44.5	HD-NPA-CS-001-1/2-0	8/4/10	No	2200		No	✓	
Nitrobenzene	20	ND	NA	NA	No	NA		0.63	ND	NA	NA	No	22			✓	
N-Nitrosodi-n-propylamine	0.037	ND	NA	NA	No	NA		0.013	ND	NA	NA	No	0.33			✓	
N-Nitrosodiphenylamine	83	ND	NA	NA	No	NA		15	ND	NA	NA	No	470			✓	
o-Xylene [5]	1000	0.0054	HD Fire Pond B2 (0-1)	6/16/03	No	NA		1000	—	—	—	—	280		No	✓	
Pentachlorophenol	5	ND	NA	NA	No	NA		5	ND	NA	NA	No	4			✓	
Phenanthrene	10000	0.036	HD-B51-TP-2A-1.5/2-0	1/8/09	No	NA		10000	15	HD-NPA-CS-012-1.5/2-0	8/4/10	No	NA		Yes	✓	
Phenol	200	ND	NA	NA	No	NA		200	ND	NA	NA	No	25000			✓	
Potassium*	NA	3650	PSWS-2	6/8/98	No	NA		NA	—	—	—	—	NA		No	✓	
Pyrene	2200	0.032	HD-B51-TP-2A-1.5/2-0	1/8/09	No	NA		2200	9.8	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	2300		Yes	✓	
Selenium	26	19	SE Corner 11-15-01	11/15/01	No	NA		26	0.77	HD-B51H-CS-003-1/1.5-0	8/24/11	No	580		No	✓	
Silver	84	0.5	HD Fire Pond B4 and A2	6/16/03	No	NA		84	0.12	HD-NPA-CS-001-1/2-0	8/4/10	No	580		No	✓	
Sodium*	NA	310	PSWS-1-B	6/8/98	No	NA		NA	—	—	—	—	NA		No	✓	

TABLE 4.1-5
Screening of Soil Data - East Campus 0 to 2 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	**PADEP MSC Screening Level (mg/kg)**	**Maximum Detected (mg/kg)**	**Maximum Detected Sample Location**	**Date Sampled**	**Is Maximum Concentration > MSC Screening Level?**	**USEPA RSL (mg/kg)**	**Is Maximum Detected Concentration > RSL?**	**PADEP MSC Screening Level (mg/kg)**	**Maximum Detected (mg/kg)**	**Maximum Detected Sample Location**	**Date Sampled**	**Is Maximum Concentration > MSC Screening Level?**	**USEPA RSL (mg/kg)**	**Is Maximum Detected Concentration > RSL?**	**Is Post-Soils RA Maximum > Soils RA Maximum?**	**Attainment Under SHS**	**Attainment Under SSS**
Styrene	24	0.018	HD-NETT-SB-043-02-0	4/4/07	No	NA		24	ND	NA	NA	No	3500		No	✓	
Tetrachloroethene	0.5	403	NTT-SG25a	12/21/99	Yes	2.6	**YES - COC**	0.5	ND	NA	NA	No	39		No		✓
Thallium	14	0.56	HD-ELF-SB-002-02-0	4/25/07	No	NA		14	0.41	HD-NPA-SB-018-0.5/1.5-0	7/16/10	No	1.2		No	✓	
Toluene	100	0.2	NETT-9	1/1/87	No	NA		100	0.17	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	4700		No	✓	
Toxaphene	1.2	ND	NA	NA	No	NA		1.2	—	—	—	—	2.1			✓	
trans-1,2-Dichloroethene	10	4.4	NETT-10	3/30/87	No	NA		10	ND	NA	NA	No	30		No	✓	
trans-1,3-Dichloropropene [6]	2.6	ND	NA	NA	No	NA		2.7	ND	NA	NA	No	8.2			✓	
Trichloroethene	0.5	0.8	NETT-8	3/30/87	Yes	6.4	No	0.5	ND	NA	NA	No	1.9		No		✓
Trichlorofluoromethane	200	ND	NA	NA	No	NA		200	—	—	—	—	35000			✓	
Vanadium	20000	36.8	BG-12	6/3/98	No	NA		680	21.3	HD-NPA-SB-018-0.5/1.5-0	7/16/10	No	580		No	✓	
Vinyl Chloride	0.2	1.5	NETT-10	3/30/87	Yes	1.7	No	0.2	ND	NA	NA	No	1.7		No		✓
Xylenes (Total)	1000	2.7	HD-NETT-SB-042-02-0	4/4/07	No	NA		1000	0.83	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	250		No	✓	
Zinc	12000	606	PSWS-2	6/8/98	No	NA		12000	106	HD-NPA-CS-001-1/2-0	8/4/10	No	35000		No	✓	

Notes:
* Essential Nutrient
— Substance Not Analyzed in Samples
NA - Not Applicable
ND - Not Detected
mg/kg - Milligrams per kilogram
PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
SHS - Statewide health standard
SSS - Site-specific standard
Post-Soils Risk Assessment USEPA RSLs are current as of November 2022
[1] Using RSL for cis-1,2-Dichloroethene (CASRN 156-59-2)
[2] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[3] Using RSL for Endosulfan (CASRN 115-29-7)
[4] Using RSL for Chlordane (technical mixture) (CASRN 12789-03-6)
[5] Using MSC screening level for Xylenes (total) (CASRN 1330-20-7)
[6] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-6
Screening of Soil Data - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	Is Post-Soils RA Maximum > Soils RA Maximum?	Attainment Under SHS	Attainment Under SSS
1,1,1,2-Tetrachloroethane	18	ND	NA	NA	No	NA		18	ND	NA	NA	No	8.8			✓	
1,1,1-Trichloroethane	20	50.9	NTT-SG25a	12/21/99	Yes	3800	No	20	ND	NA	NA	No	3600		No		✓
1,1,2,2-Tetrachloroethane	0.43	0.26	NPBA-OB-2 8-10	4/22/88	No	NA		0.43	ND	NA	NA	No	2.7		No	✓	
1,1,2-Trichloroethane	0.5	ND	NA	NA	No	NA		0.5	ND	NA	NA	No	0.63			✓	
1,1-Dichloroethane	16	1.16	NETT-11	3/30/87	No	NA		16	0.0023	HD-IWTP035-CS-001-9/10-0	10/11/11	No	16		No	✓	
1,1-Dichloroethene	0.7	0.05	NETT-10	3/30/87	No	NA		0.7	0.0015	HD-IWTP033-CS-002-13/14-0	10/11/11	No	100		No	✓	
1,2,4-Trichlorobenzene	27	0.015	HD-B51-TP-1G-9/9.5-0	12/30/08	No	NA		27	0.066	HD-IWTP033-CS-002-13/14-0	10/11/11	No	26		Yes	✓	
1,2,4-Trimethylbenzene	—	—	—	—	—	—	—	300	410	HD-NPA-EX-005-3/4-0	7/14/10	Yes	180	Yes	Yes		✓
1,2-Dibromo-3-Chloropropane	0.02	ND	NA	NA	No	NA		0.02	—	—	—	—	0.064			✓	
1,2-Dibromoethane	0.005	ND	NA	NA	No	NA		0.005	ND	NA	NA	No	0.16			✓	
1,2-Dichlorobenzene	60	ND	NA	NA	No	NA		60	0.25	HD-IWTP033-CS-002-13/14-0	10/11/11	No	930		Yes	✓	
1,2-Dichloroethane	0.5	4.1	LFTP-14	11/14/86	Yes	2.2	**YES - COC**	0.5	ND	NA	NA	No	2		No		✓
1,2-Dichloroethene [1]	7	ND	NA	NA	No	NA		7	—	—	—	—	37			✓	
1,2-Dichloropropane	0.5	ND	NA	NA	No	NA		0.5	ND	NA	NA	No	6.6			✓	
1,3,5-Trimethylbenzene	—	—	—	—	—	—	—	93	120	HD-NPA-EX-005-3/4-0	7/14/10	Yes	150	No	Yes		✓
1,3-Dichlorobenzene	61	ND	NA	NA	No	NA		61	ND	NA	NA	No	NA			✓	
1,3-Dichloropropene	2.6	ND	NA	NA	No	NA		2.7	ND	NA	NA	No	8.2			✓	
1,4-Dichlorobenzene	10	0.021	HD-DSA-QC-DUP7-04-1	5/7/07	No	NA		10	0.061	HD-IWTP033-CS-002-13/14-0	10/11/11	No	11		Yes	✓	
1,4-Dioxane	3.2	ND	NA	NA	No	NA		2.7	1	HD-SPBA-SB-006-5/5.5-0 HD-SPBA-SB-007-0.5/1.0-0 HD-SPBA-SB-009-0.5/1.0-0 HD-SPBA-SB-010-0.5/1.0-0 HD-SPBA-SB-010-5/5.5-0 HD-SPBA-SB-010-10/10.5-0	3/27/17 3/28/17 3/29/17 3/30/17 3/30/17 3/30/17	No	24		Yes	✓	
2,4,5-Trichlorophenol	6100	ND	NA	NA	No	NA		5900	ND	NA	NA	No	8200			✓	
2,4,6-Trichlorophenol	29	ND	NA	NA	No	NA		28	ND	NA	NA	No	82			✓	
2,4-Dichlorophenol	2	ND	NA	NA	No	NA		2	ND	NA	NA	No	250			✓	
2,4-Dimethylphenol	200	ND	NA	NA	No	NA		190	ND	NA	NA	No	1600			✓	
2,4-Dinitrophenol	20	ND	NA	NA	No	NA		19	ND	NA	NA	No	160			✓	
2,4-Dinitrotoluene	0.84	ND	NA	NA	No	NA		0.88	ND	NA	NA	No	7.4			✓	
2,6-Dinitrotoluene	10	ND	NA	NA	No	NA		0.18	ND	NA	NA	No	1.5			✓	
2-Butanone	400	0.46	HD-ELF-SB-008-03-0	4/26/07	No	NA		400	0.0057	HD-IWTP038-CS-004-6/7-0	10/11/11	No	19000		No	✓	
2-Chloroethyl Vinyl Ether	NA	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
2-Chloronaphthalene	18000	ND	NA	NA	No	NA		17000	ND	NA	NA	No	6000			✓	
2-Chlorophenol	4.4	ND	NA	NA	No	NA		4.4	ND	NA	NA	No	580			✓	
2-Hexanone	4.4	0.0772	NTT-SG15a Dup	12/17/99	No	NA		26	ND	NA	NA	No	130		No	✓	
2-Methylnaphthalene	1600	0.2	HD-ELF-SB-008-03-0	4/26/07	No	NA		100	2.3	HD-NPA-SB-016-3/4-0	7/16/10	No	300		Yes	✓	
2-Methylphenol	510	ND	NA	NA	No	NA		490	ND	NA	NA	No	4100			✓	
2-Nitroaniline	31	ND	NA	NA	No	NA		0.044	ND	NA	NA	No	800			✓	
2-Nitrophenol	82	ND	NA	NA	No	NA		78	ND	NA	NA	No	NA			✓	
3,3'-Dichlorobenzidine	32	ND	NA	NA	No	NA		33	ND	NA	NA	No	5.1			✓	
3/4-Methylphenol [2]	51	88	PSWS-1	3/22/00	Yes	310	No	49	ND	NA	NA	No	1600		No		✓
3-Nitroaniline	3.1	ND	NA	NA	No	NA		NA	ND	NA	NA	No	NA			✓	
4,4'-DDD	120	ND	NA	NA	No	NA		120	—	—	—	—	9.6			✓	
4,4'-DDE	170	ND	NA	NA	No	NA		170	—	—	—	—	9.3			✓	
4,4'-DDT	330	ND	NA	NA	No	NA		330	—	—	—	—	8.5			✓	
4,6-Dinitro-2-Methylphenol	1	ND	NA	NA	No	NA		0.78	ND	NA	NA	No	6.6			✓	
4-Bromophenyl phenyl ether	NA	0.092	HD-DSA-SB-002-04-0	5/7/07	No	NA		NA	ND	NA	NA	No	NA		No	✓	
4-Chloro-3-Methyl-Phenol	110	ND	NA	NA	No	NA		2000	ND	NA	NA	No	8200			✓	
4-Chloroaniline	1.6	ND	NA	NA	No	NA		1.8	ND	NA	NA	No	11			✓	
4-Chlorodiphenyl Ether	NA	ND	NA	NA	No	NA		NA	ND	NA	NA	No	NA			✓	
4-Methyl-2-Pentanone	820	0.4	HD-ELF-SB-009-09-0	6/22/07	No	NA		780	ND	NA	NA	No	14000		No	✓	

TABLE 4.1-6
Screening of Soil Data - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	Is Post-Soils RA Maximum > Soils RA Maximum?	Attainment Under SHS	Attainment Under SSS
4-Nitroaniline	13	ND	NA	NA	No	NA		14	ND	NA	NA	No	110			✓	
4-Nitrophenol	6	ND	NA	NA	No	NA		6	ND	NA	NA	No	NA			✓	
Acenaphthene	4700	0.37	HD-ELF-SB-008-03-0	4/26/07	No	NA		4700	11	HD-NPA-SB-016-3/4-0	7/16/10	No	4500		Yes	✓	
Acenaphthylene	6900	ND	NA	NA	No	NA		6600	0.48	HD-NPA-CS-001-1/2-0	8/4/10	No	NA		Yes	✓	
Acetone	9200	0.49	HD-NETT-SB-038-04-0	4/3/07	No	NA		8800	0.015	HD-NPA-CS-012-1.5/2-0	8/4/10	No	110000		No	✓	
Acrolein	0.018	ND	NA	NA	No	NA		0.018	—	—	—	—	0.06			✓	
Acrylonitrile	0.37	0.0022	SE Corner 11	11/21/01	No	NA		0.37	ND	NA	NA	No	1.1		No	✓	
Aldrin	1.8	ND	NA	NA	No	NA		1.9	—	—	—	—	0.18			✓	
Alpha-BHC	0.19	ND	NA	NA	No	NA		0.2	—	—	—	—	0.36			✓	
Alpha-Endosulfan [3]	260	ND	NA	NA	No	NA		260	—	—	—	—	700			✓	
Aluminum	190000	21900	BG-12	6/3/98	No	NA		190000	—	—	—	—	110000		No	✓	
Anthracene	350	0.67	HD-ELF-SB-008-03-0	4/26/07	No	NA		350	6.1	HD-NPA-CS-012-1.5/2-0	8/4/10	No	23000		Yes	✓	
Antimony	27	37	HD-3: 2-4	9/11/89	Yes	410	No	27	0.67	HD-B41RAA16-CS-013-6/7-0	10/19/11	No	47		No		✓
Aroclor-1016	200	ND	NA	NA	No	NA		190	ND	NA	NA	No	5.1			✓	
Aroclor-1221	0.63	ND	NA	NA	No	NA		0.68	ND	NA	NA	No	0.83			✓	
Aroclor-1232	0.5	ND	NA	NA	No	NA		0.54	ND	NA	NA	No	0.72			✓	
Aroclor-1242	16	ND	NA	NA	No	NA		17	ND	NA	NA	No	0.95			✓	
Aroclor-1248	62	0.13	HD-ELF-SB-008-03-0	4/26/07	No	NA		67	ND	NA	NA	No	0.94		No	✓	
Aroclor-1254	260	5.5	SETT 10-1-01	10/1/01	No	NA		380	1.9	HD-NPA-CS-001-1/2-0	8/4/10	No	0.97		No	✓	
Aroclor-1260	590	0.0752	WP-SG7a	12/22/99	No	NA		630	13	HD-NPA-SB-016-3/4-0	7/16/10	No	0.99		Yes	✓	
Arsenic	29	29.1	HD-ELF-SB-008-03-0	4/26/07	Yes	1.6	**YES - COC**	29	22	HD-B51H-CS-011-1/1.5-0	8/24/11	No	3		No		✓
Barium	8200	427	HD-ELF-SB-011-14-0	5/9/07	No	NA		8200	140	HD-B51H-CS-001-1/1.5-0	8/24/11	No	22000		No	✓	
Benzene	0.5	0.22	LFTP-14	11/14/86	No	NA		0.5	0.0068	HD-IWTP030-CS-001-2/3-0	10/13/11	No	5.1		No	✓	
Benzo(a)anthracene	320	1.6	HD-ELF-SB-008-03-0	4/26/07	No	NA		340	3.7	HD-NPA-SB-016-3/4-0	7/16/10	No	21		Yes	✓	
Benzo(a)pyrene	46	2.6	HD-ELF-SB-006-14-0	4/26/07	No	NA		46	3	HD-NPA-SB-016-3/4-0	7/16/10	No	2.1		Yes	✓	
Benzo(b)fluoranthene	170	0.985	LF-SG13a	12/9/99	No	NA		170	3.6	HD-NPA-SB-016-3/4-0	7/16/10	No	21		Yes	✓	
Benzo(g,h,i)perylene	180	0.502	LF-SG13a	12/9/99	No	NA		180	1	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	NA		Yes	✓	
Benzo(k)fluoranthene	610	0.49	LF-SG13a	12/9/99	No	NA		610	0.021	HD-NPA-CS-006-2/2.5-0	8/4/10	No	210		No	✓	
Beryllium	320	2.3	PSWS-2	6/8/98	No	NA		320	1.6	HD-IWTP033-CS-002-13/14-0	10/11/11	No	230		No	✓	
Beta-BHC	0.82	ND	NA	NA	No	NA		0.88	—	—	—	—	1.3			✓	
Beta-Endosulfan [3]	260	ND	NA	NA	No	NA		260	—	—	—	—	700			✓	
Bis(2-Chloroethoxy) Methane	31	ND	NA	NA	No	NA		29	ND	NA	NA	No	250			✓	
Bis(2-Chloroethyl) Ether	0.076	ND	NA	NA	No	NA		0.076	ND	NA	NA	No	1			✓	
Bis(2-Chloroisopropyl) Ether	30	ND	NA	NA	No	NA		30	ND	NA	NA	No	4700			✓	
Bis(2-ethylhexyl) phthalate	130	17	HD-ELF-SB-006-14-0	4/26/07	No	NA		130	1.3	HD-IWTP033-CS-002-13/14-0	10/11/11	No	160		No	✓	
Bromochloromethane	9	ND	NA	NA	No	NA		9	ND	NA	NA	No	63			✓	
Bromodichloromethane	8	ND	NA	NA	No	NA		8	ND	NA	NA	No	1.3			✓	
Bromoform	8	0.0011	SB-12-6	10/2/02	No	NA		8	ND	NA	NA	No	86		No	✓	
Bromomethane	1	ND	NA	NA	No	NA		1	ND	NA	NA	No	3			✓	
Butylbenzylphthalate	10000	0.072	HD-B45-TP-1B-11/11.5-0	1/8/09	No	NA		10000	ND	NA	NA	No	1200		No	✓	
Cadmium	38	21.2	HD-ELF-SB-007-03-0	6/22/07	No	NA		38	25	HD-IWTP033-CS-002-13/14-0	10/11/11	No	10		Yes	✓	
Calcium*	NA	26400	PSWS-2	6/8/98	No	NA		NA	—	—	—	—	NA		No	✓	
Carbazole	83	0.32	HD-ELF-SB-008-03-0	4/26/07	No	NA		89	0.21	HD-NPA-CS-012-1.5/2-0	8/4/10	No	NA		No	✓	
Carbon Disulfide	620	0.0156	HD Fire Pond A3 (0-1)	6/16/03	No	NA		620	ND	NA	NA	No	350		No	✓	
Carbon Tetrachloride	0.5	ND	NA	NA	No	NA		0.5	ND	NA	NA	No	2.9			✓	
Chlordane [4]	49	ND	NA	NA	No	NA		49	—	—	—	—	7.7			✓	
Chlorobenzene	10	0.34	LFTP-14	11/14/86	No	NA		10	0.13	HD-NPA-SB-016-3/4-0	7/16/10	No	130		No	✓	
Chlorodibromomethane	8	ND	NA	NA	No	NA		8	ND	NA	NA	No	39			✓	
Chloroethane	90	0.44	NETT-11	3/30/87	No	NA		8800	ND	NA	NA	No	2300		No	✓	
Chloroform	8	0.015	LFTP-14	11/14/86	No	NA		8	0.0011	HD-IWTP030-CS-001-2/3-0	10/13/11	No	1.4		No	✓	
Chloromethane	3	ND	NA	NA	No	NA		3	ND	NA	NA	No	46			✓	
Chromium	190	507	HD-SPBA-SB-024-03-0	1/23/08	Yes	5.6	**YES - COC**	190	290	HD-IWTP033-CS-002-13/14-0	10/11/11	Yes	6.3	Yes	No		✓

TABLE 4.1-6
Screening of Soil Data - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	Is Post-Soils RA Maximum > Soils RA Maximum?	Attainment Under SHS	Attainment Under SSS
Chrysene	230	1.8	HD-ELF-SB-008-03-0	4/26/07	No	NA		230	6.4	HD-NPA-SB-016-3/4-0	7/16/10	No	2100		Yes	✓	
cis-1,2-Dichloroethene	7	11	HD-NETT-SB-038-04-0	4/3/07	Yes	200	No	7	63	HD-B41RAA16-CS-010-4.5/5.5-1	9/28/11	Yes	37	Yes	Yes		✓
cis-1,3-Dichloropropene	2.6	ND	NA	NA	No	NA		2.7	—	—	—	—	8.2			✓	
Cobalt	140	19.5	BG-12	6/3/98	No	NA		130	—	—	—	—	35		No	✓	
Copper	43000	610	HD-ELF-SB-006-09-0	4/26/07	No	NA		43000	66.1	HD-NPA-SB-017-1.5/2.5-0	7/16/10	No	4700		No	✓	
Cyanide, Free	200	2.9	HD-NETT-SB-002-10-0	4/6/07	No	NA		200	7.9	HD-B41RAA16-CS-013-6/7-0	10/19/11	No	15		Yes	✓	
Cyanide, Total	200	23	HD-NETT-SB-047-02-0	4/4/07	No	NA		200	ND	NA	NA	No	15		No	✓	
Delta-BHC	NA	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
Dibenzo(a,h)anthracene	160	0.058	HD-SPBA-SB-027-04-0	5/7/07	No	NA		270	0.17	HD-B41RAA16-CS-013-6/7-0	10/19/11	No	2.1		Yes	✓	
Dibenzofuran	260	0.37	HD-ELF-SB-008-03-0	4/26/07	No	NA		250	5.5	HD-NPA-SB-016-3/4-0	7/16/10	No	120		Yes	✓	
Dieldrin	0.44	ND	NA	NA	No	NA		0.47	—	—	—	—	0.14			✓	
Diethylphthalate	8200	0.06	HD-B51-TP-1C-9/9.5-0	12/30/08	No	NA		7800	0.066	HD-IWTP032-CS-001-6/7-0	10/13/11	No	66000		Yes	✓	
Dimethylphthalate	NA	ND	NA	NA	No	NA		NA	ND	NA	NA	No	NA			✓	
Di-n-Butylphthalate	4100	ND	NA	NA	No	NA		4000	0.066	HD-B41RAA16-CS-013-6/7-0	10/19/11	No	8200		Yes	✓	
Di-n-octylphthalate	10000	ND	NA	NA	No	NA		10000	ND	NA	NA	No	820			✓	
Endosulfan Sulfate	70	ND	NA	NA	No	NA		70	—	—	—	—	490			✓	
Endrin	5.5	ND	NA	NA	No	NA		5.5	—	—	—	—	25			✓	
Endrin Aldehyde	NA	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
Ethylbenzene	70	10	HD-NETT-SB-037-12-0	4/3/07	No	NA		70	24	HD-NPA-EX-005-3/4-0	7/14/10	No	25		Yes	✓	
Fluoranthene	3200	5.6	HD-ELF-SB-008-03-0	4/26/07	No	NA		3200	17	HD-NPA-SB-016-3/4-0	7/16/10	No	3000		Yes	✓	
Fluorene	3800	0.76	HD-ELF-SB-008-03-0	4/26/07	No	NA		3800	7.8	HD-NPA-SB-016-3/4-0	7/16/10	No	3000		Yes	✓	
Heptachlor	0.68	ND	NA	NA	No	NA		0.68	—	—	—	—	0.63			✓	
Heptachlor Epoxide	1.1	ND	NA	NA	No	NA		1.1	—	—	—	—	0.33			✓	
Hexachlorobenzene	0.96	ND	NA	NA	No	NA		0.96	ND	NA	NA	No	0.96			✓	
Hexachlorobutadiene	39	ND	NA	NA	No	NA		42	ND	NA	NA	No	5.3			✓	
Hexachlorocyclopentadiene	91	ND	NA	NA	No	NA		91	ND	NA	NA	No	0.75			✓	
Hexachloroethane	0.56	ND	NA	NA	No	NA		0.56	ND	NA	NA	No	8			✓	
Hexavalent Chromium	190	254	HD-SPBA-SB-024-03-0	1/23/08	Yes	5.6	**YES - COC**	190	12	HD-IWTP030-CS-004-2/3-0	10/13/11	No	6.3		No		✓
Indeno(1,2,3-cd)pyrene	28000	0.6	HD-ELF-SB-008-03-0	4/26/07	No	NA		18000	0.55	HD-NPA-CS-001-1/2-0	8/4/10	No	21		No	✓	
Iron	190000	90200	PSWS-2	6/8/98	No	NA		190000	—	—	—	—	82000		No	✓	
Isophorone	10	ND	NA	NA	No	NA		10	ND	NA	NA	No	2400			✓	
Isopropylbenzene	—	—	—	—	—	—	—	2500	23	HD-NPA-EX-005-3/4-0	7/14/10	No	990		Yes	✓	
Lead	450	1580	HD-ELF-SB-006-14-0	4/26/07	Yes	800	**YES - COC**	450	408	HD-NPA-SB-016-3/4-0	7/16/10	No	800		No		✓
Lindane (Gamma-BHC)	0.072	ND	NA	NA	No	NA		0.072	—	—	—	—	1			✓	
m,p-Xylene [5]	1000	0.0017	HD Fire Pond A3 (0-1)	6/16/03	No	NA		1000	240	HD-NPA-EX-005-3/4-0	7/14/10	No	250		Yes	✓	
Magnesium*	NA	10100	PSWS-2	6/8/98	No	NA		NA	—	—	—	—	NA		No	✓	
Manganese	2000	1600	PSWS-2	6/8/98	No	NA		2000	—	—	—	—	2600		No	✓	
Mercury	10	1.7	OWCA-SP-1	4/27/95	No	NA		10	0.15	HD-NPA-CS-001-1/2-0	8/4/10	No	4.6		No	✓	
Methyl tert-butyl ether	2	ND	NA	NA	No	NA		2	0.0019	HD-B45T-SB-006-12.0/12.5-0	5/4/11	No	210		Yes	✓	
Methylene chloride	0.5	0.7	LFTP-14	11/14/86	Yes	53	No	0.5	0.65	HD-B41RAA16-CS-009-4.5/5.5-0	9/28/11	Yes	320	No	No		✓
Naphthalene	25	0.49	HD-ELF-SB-008-03-0	4/26/07	No	NA		25	23	HD-NPA-EX-005-3/4-0	7/14/10	No	8.6		Yes	✓	
N-Hexane Extractable Material	—	—	—	—	—	—	—	5300	5150	HD-NPA-CS-001-1/2-0	8/4/10	No	250		Yes	✓	
Nickel	650	454	HD-ELF-SB-010-03-0	6/22/07	No	NA		650	400	HD-B41RAA16-CS-013-6/7-0	10/19/11	No	2200		No	✓	
Nitrobenzene	20	ND	NA	NA	No	NA		0.63	ND	NA	NA	No	22			✓	
N-Nitrosodi-n-propylamine	0.037	ND	NA	NA	No	NA		0.013	ND	NA	NA	No	0.33			✓	
N-Nitrosodiphenylamine	83	ND	NA	NA	No	NA		15	ND	NA	NA	No	470			✓	
o-Xylene [5]	1000	0.0054	HD Fire Pond B2 (0-1)	6/16/03	No	NA		1000	—	—	—	—	280		No	✓	
Pentachlorophenol	5	ND	NA	NA	No	NA		5	ND	NA	NA	No	4			✓	
Phenanthrene	10000	3.9	HD-ELF-SB-008-03-0	4/26/07	No	NA		10000	19	HD-NPA-SB-016-3/4-0	7/16/10	No	NA		Yes	✓	
Phenol	200	0.072	HD-B45-TP-1A-10/5/11-0	1/8/09	No	NA		200	ND	NA	NA	No	25000		No	✓	
Potassium*	NA	3650	PSWS-2	6/8/98	No	NA		NA	—	—	—	—	NA		No	✓	
Pyrene	2200	2.6	HD-ELF-SB-008-03-0	4/26/07	No	NA		2200	25	HD-NPA-SB-016-3/4-0	7/16/10	No	2300		Yes	✓	

TABLE 4.1-6
Screening of Soil Data - East Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	**PADEP MSC Screening Level (mg/kg)**	**Maximum Detected (mg/kg)**	**Maximum Detected Sample Location**	**Date Sampled**	**Is Maximum Concentration > MSC Screening Level?**	**USEPA RSL (mg/kg)**	**Is Maximum Detected Concentration > RSL?**	**PADEP MSC Screening Level (mg/kg)**	**Maximum Detected (mg/kg)**	**Maximum Detected Sample Location**	**Date Sampled**	**Is Maximum Concentration > MSC Screening Level?**	**USEPA RSL (mg/kg)**	**Is Maximum Detected Concentration > RSL?**	**Is Post-Soils RA Maximum > Soils RA Maximum?**	**Attainment Under SHS**	**Attainment Under SSS**
Selenium	26	19	SE Corner 11-15-01	11/15/01	No	NA		26	1.1	HD-B41RAA16-CS-007-4/5-0 HD-IWTP033-CS-002-13/14-0 HD-IWTP039-CS-001-3/4-0	9/28/11 10/11/11 10/11/11	No	580		No	✓	
Silver	84	15.3	HD-ELF-SB-006-14-0	4/26/07	No	NA		84	0.59	HD-NPA-SB-016-3/4-0	7/16/10	No	580		No	✓	
Sodium*	NA	310	PSWS-1-B	6/8/98	No	NA		NA	—	—	—	—	NA		No	✓	
Styrene	24	0.018	HD-NETT-SB-043-02-0	4/4/07	No	NA		24	ND	NA	NA	No	3500		No	✓	
Tetrachloroethene	0.5	660	SB-13-6	10/2/02	Yes	2.6	**YES - COC**	0.5	1.3	HD-B41RAA16-CS-007-4/5-0	9/28/11	Yes	39	No	No		✓
Thallium	14	20	HD-3: 2-4	9/11/89	Yes	10	**YES - COC**	14	0.6	HD-NPA-CS-007-3.5/4-1	8/4/10	No	1.2		No		✓
Toluene	100	16	HD-NETT-SB-037-12-0	4/3/07	No	NA		100	14	HD-NPA-EX-005-3/4-0	7/14/10	No	4700		No	✓	
Toxaphene	1.2	ND	NA	NA	No	NA		1.2	—	—	—	—	2.1			✓	
trans-1,2-Dichloroethene	10	4.4	NETT-10	3/30/87	No	NA		10	7.9	HD-B41RAA16-CS-010-4.5/5.5-1	9/28/11	No	30		Yes	✓	
trans-1,3-Dichloropropene [6]	2.6	ND	NA	NA	No	NA		2.7	ND	NA	NA	No	8.2			✓	
Trichloroethene	0.5	0.8	NETT-8	3/30/87	Yes	6.4	No	0.5	6.6	HD-B41RAA16-CS-010-4.5/5.5-0	9/28/11	Yes	1.9	Yes	Yes		✓
Trichlorofluoromethane	200	0.00036	SB-14-4	10/2/02	No	NA		200	—	—	—	—	35000		No	✓	
Vanadium	72000	44.3	HD-SPBA-SB-025-03-0	1/23/08	No	NA		680	65	HD-IWTP033-CS-002-13/14-0	10/11/11	No	580		Yes	✓	
Vinyl Chloride	0.2	2.5	HD-NETT-SB-037-12-1	4/4/07	Yes	1.7	**YES - COC**	0.2	1.5	HD-B41RAA16-CS-010-4.5/5.5-1	9/28/11	Yes	1.7	No	No		✓
Xylenes (Total)	1000	86	HD-ELF-SB-008-03-0	4/26/07	No	NA		1000	—	—	—	—	250		No	✓	
Zinc	12000	2400	HD-ELF-SB-006-14-0	4/26/07	No	NA		12000	106	HD-NPA-CS-001-1/2-0	8/4/10	No	35000		No	✓	

Notes:
* Essential Nutrient
— Substance Not Analyzed in Samples
NA - Not Applicable
ND - Not Detected
mg/kg - Milligrams per kilogram
PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
SHS - Statewide health standard
SSS - Site-specific standard
Post-Soils Risk Assessment USEPA RSLs are current as of November 2022
[1] Using RSL for cis-1,2-Dichloroethene (CASRN 156-59-2)
[2] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[3] Using RSL for Endosulfan (CASRN 115-29-7)
[4] Using RSL for Chlordane (technical mixture) (CASRN 12789-03-6)
[5] Using MSC screening level for Xylenes (total) (CASRN 1330-20-7)
[6] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.1-7
Screening of Soil Data - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	Is Post-Soils RA Maximum > Soils RA Maximum?	Attainment Under SHS	Attainment Under SSS
1,1,1,2-Tetrachloroethane	18	ND	NA	NA	No	NA		18	ND	NA	NA	No	8.8			✓	
1,1,1-Trichloroethane	20	170	HD-B4ND-SB-014-15-0	7/23/07	Yes	3800	No	20	120	HD-B4ND-CS-007-12/13-0	10/26/11	Yes	3600	No	No		✓
1,1,2,2-Tetrachloroethane	0.43	ND	NA	NA	No	NA		0.43	ND	NA	NA	No	2.7			✓	
1,1,2-Trichloroethane	0.5	0.54	HD-WPL-SB-055-07-0	3/10/04	Yes	5.3	No	0.5	ND	NA	NA	No	0.63		No		✓
1,1-Dichloroethane	16	1	HD-B4ND-SB-014-15-0	7/23/07	No	NA		16	0.0019	HD-B41-TR-1C-5/5.5-0	1/21/09	No	16		No	✓	
1,1-Dichloroethene	0.7	0.11	OWCA-CB-9	4/27/88	No	NA		0.7	0.0016	HD-B41-TR-1E-10.5/11-0	2/2/09	No	100		No	✓	
1,2,4-Trichlorobenzene	27	ND	NA	NA	No	NA		27	0.17	HD-IWTP031-CS-001-11/12-0	10/5/11	No	26		Yes	✓	
1,2,4-Trimethylbenzene	—	—	—	—	—	—		300	120	HD-B45T-SB-005-11.1/11.6-0	5/4/11	No	180		Yes	✓	
1,2-Dibromo-3-Chloropropane	0.02	ND	NA	NA	No	NA		0.02	—	—	—	—	0.064			✓	
1,2-Dibromoethane	0.005	ND	NA	NA	No	NA		0.005	ND	NA	NA	No	0.16			✓	
1,2-Dichlorobenzene	60	0.21	HD-WPL-SB-069-07-0	3/11/04	No	NA		60	0.6	HD-IWTP031-CS-004-11/12-0	10/5/11	No	930		Yes	✓	
1,2-Dichloroethane	0.5	ND	NA	NA	No	NA		0.5	ND	NA	NA	No	2			✓	
1,2-Dichloroethene [1]	7	ND	NA	NA	No	NA		7	—	—	—	—	37			✓	
1,2-Dichloropropane	0.5	ND	NA	NA	No	NA		0.5	ND	NA	NA	No	6.6			✓	
1,3,5-Trimethylbenzene	—	—	—	—	—	—		93	30	HD-B45T-SB-005-11.1/11.6-0	5/4/11	No	150		Yes	✓	
1,3-Dichlorobenzene	61	ND	NA	NA	No	NA		61	ND	NA	NA	No	NA			✓	
1,3-Dichloropropene	2.6	ND	NA	NA	No	NA		2.7	—	—	—	—	8.2			✓	
1,4-Dichlorobenzene	10	0.34	HD-BPA-SB-035-02-0	2/6/04	No	NA		10	0.11	HD-IWTP031-CS-004-11/12-0	10/5/11	No	11		No	✓	
1,4-Dioxane	3.2	ND	NA	NA	No	NA		2.7	ND	NA	NA	No	24			✓	
2,4,5-Trichlorophenol	6100	ND	NA	NA	No	NA		5900	ND	NA	NA	No	8200			✓	
2,4,6-Trichlorophenol	29	ND	NA	NA	No	NA		28	ND	NA	NA	No	82			✓	
2,4-Dichlorophenol	2	ND	NA	NA	No	NA		2	ND	NA	NA	No	250			✓	
2,4-Dimethylphenol	200	0.055	HD-B41S-SB-S7N-11	4/2/08	No	NA		190	ND	NA	NA	No	1600		No	✓	
2,4-Dinitrophenol	20	ND	NA	NA	No	NA		19	ND	NA	NA	No	160			✓	
2,4-Dinitrotoluene	0.84	ND	NA	NA	No	NA		0.88	ND	NA	NA	No	7.4			✓	
2,6-Dinitrotoluene	10	1.53	BPA TP-1a	12/7/99	No	NA		0.18	ND	NA	NA	No	1.5		No	✓	
2-Butanone	400	5.2	OWCA-SP-3	4/28/95	No	NA		400	ND	NA	NA	No	19000		No	✓	
2-Chloroethyl Vinyl Ether	NA	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
2-Chloronaphthalene	18000	ND	NA	NA	No	NA		17000	ND	NA	NA	No	6000			✓	
2-Chlorophenol	4.4	ND	NA	NA	No	NA		4.4	ND	NA	NA	No	580			✓	
2-Hexanone	4.4	ND	NA	NA	No	NA		26	ND	NA	NA	No	130			✓	
2-Methylnaphthalene	1600	6.6	HD-WPL-SB-095-05-0	4/26/07	No	NA		100	1.6	HD-IWTP031-CS-004-11/12-0	10/5/11	No	300		No	✓	
2-Methylphenol	510	0.085	HD-B41N-TP-1G-4/4.5-0	12/23/08	No	NA		490	ND	NA	NA	No	4100		No	✓	
2-Nitroaniline	31	ND	NA	NA	No	NA		0.044	ND	NA	NA	No	800			✓	
2-Nitrophenol	82	ND	NA	NA	No	NA		78	ND	NA	NA	No	NA			✓	
3,3'-Dichlorobenzidine	32	ND	NA	NA	No	NA		33	ND	NA	NA	No	5.1			✓	
3/4-Methylphenol [2]	51	0.39	HD-WPL-SB-120-02-0	4/19/07	No	NA		49	ND	NA	NA	No	1600		No	✓	
3-Nitroaniline	3.1	ND	NA	NA	No	NA		NA	ND	NA	NA	No	NA			✓	
4,4'-DDD	120	ND	NA	NA	No	NA		120	—	—	—	—	9.6			✓	
4,4'-DDE	170	ND	NA	NA	No	NA		170	—	—	—	—	9.3			✓	
4,4'-DDT	330	ND	NA	NA	No	NA		330	—	—	—	—	8.5			✓	
4,6-Dinitro-2-Methylphenol	1	ND	NA	NA	No	NA		0.78	ND	NA	NA	No	6.6			✓	
4-Bromophenyl phenyl ether	NA	ND	NA	NA	No	NA		NA	ND	NA	NA	No	NA			✓	
4-Chloro-3-Methyl-Phenol	110	ND	NA	NA	No	NA		2000	ND	NA	NA	No	8200			✓	
4-Chloroaniline	1.6	ND	NA	NA	No	NA		1.8	ND	NA	NA	No	11			✓	
4-Chlorodiphenyl Ether	NA	ND	NA	NA	No	NA		NA	ND	NA	NA	No	NA			✓	
4-Methyl-2-Pentanone	820	0.43	OWCA-SP-7	4/26/95	No	NA		780	0.01	HD-B41-TR-2-4.5/5-5	1/29/09	No	14000		No	✓	
4-Methylphenol	51	0.23	HD-B-SS-2-02-00	7/30/04	No	NA		49	—	—	—	—	1600		No	✓	
4-Nitroaniline	13	ND	NA	NA	No	NA		14	ND	NA	NA	No	110			✓	
4-Nitrophenol	6	ND	NA	NA	No	NA		6	ND	NA	NA	No	NA			✓	
Acenaphthene	4700	8.2	WPL TP-5	11/26/99	No	NA		4700	0.55	HD-B41RAA16-CS-003-5/6-0	9/22/11	No	4500		No	✓	
Acenaphthylene	6900	2.6	WPL TP-5	11/26/99	No	NA		6600	ND	NA	NA	No	NA		No	✓	

TABLE 4.1-7
Screening of Soil Data - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	Is Post-Soils RA Maximum > Soils RA Maximum?	Attainment Under SHS	Attainment Under SSS
Acetone	9200	3	OWCA-SP-7	4/26/95	No	NA		8800	0.042	HD-B41-TR-2-4.5/5-5	1/29/09	No	110000		No	✓	
Acrolein	0.018	ND	NA	NA	No	NA		0.018	—	—	—	—	0.06			✓	
Acrylonitrile	0.37	ND	NA	NA	No	NA		0.37	ND	NA	NA	No	1.1			✓	
Aldrin	1.8	ND	NA	NA	No	NA		1.9	—	—	—	—	0.18			✓	
Alpha-BHC	0.19	ND	NA	NA	No	NA		0.2	—	—	—	—	0.36			✓	
Alpha-Endosulfan [3]	260	ND	NA	NA	No	NA		260	—	—	—	—	700			✓	
Aluminum	190000	11300	BG-28	6/4/98	No	NA		190000	—	—	—	—	110000		No	✓	
Anthracene	350	13	WPL TP-5	11/26/99	No	NA		350	0.11	HD-B41RAA16-CS-003-5/6-0	9/22/11	No	23000		No	✓	
Antimony	27	122	WPL-SG-33a	12/29/99	Yes	41	**YES - COC**	27	0.41	HD-B41RAA16-CS-011-6/7-0	10/19/11	No	47		No		✓
Aroclor-1016	200	ND	NA	NA	No	NA		190	ND	NA	NA	No	5.1			✓	
Aroclor-1221	0.63	ND	NA	NA	No	NA		0.68	ND	NA	NA	No	0.83			✓	
Aroclor-1232	0.5	ND	NA	NA	No	NA		0.54	ND	NA	NA	No	0.72			✓	
Aroclor-1242	16	0.04	HD-BPA-SB-024-04-0	2/5/04	No	NA		17	ND	NA	NA	No	0.95		No	✓	
Aroclor-1248	62	0.078	HD-WPL-SB-118-02-0	4/30/07	No	NA		67	ND	NA	NA	No	0.94		No	✓	
Aroclor-1254	260	270	HD-WPL-SB-095-05-0	4/26/07	Yes	0.74	**YES - COC**	380	ND	NA	NA	No	0.97		No		✓
Aroclor-1260	590	6.3	HD-WPL-SB-017-02-0	2/13/04	No	NA		630	ND	NA	NA	No	0.99		No	✓	
Aroclor-1268	0.5	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
Arsenic	29	221	WPL-SG-33a	12/29/99	Yes	1.6	**YES - COC**	29	10	HD-IWTP040-CS-001-11/12-0	10/4/11	No	3		No		✓
Barium	8200	370	HD-WPL-SB-095-05-0	4/26/07	No	NA		8200	160	HD-B41RAA16-CS-011-6/7-0	10/19/11	No	22000		No	✓	
Benzene	0.5	0.0728	WPL TP-5	11/26/99	No	NA		0.5	ND	NA	NA	No	5.1		No	✓	
Benzo(a)anthracene	320	54	WPL TP-5	11/26/99	No	NA		340	0.079	HD-IWTP031-CS-004-11/12-0	10/5/11	No	21		No	✓	
Benzo(a)pyrene	46	74	WPL TP-5	11/26/99	Yes	0.21	**YES - COC**	46	0.036	HD-B41RAA16-CS-004-4.5/5.5-0	9/22/11	No	2.1		No		✓
Benzo(b)fluoranthene	170	95	WPL TP-5	11/26/99	No	NA		170	0.08	HD-B41-TR-1K-9.5/10-0	2/2/09	No	21		No	✓	
Benzo(g,h,i)perylene	180	43	WPL TP-5	11/26/99	No	NA		180	0.024	HD-B41RAA16-CS-004-4.5/5.5-0	9/22/11	No	NA		No	✓	
Benzo(k)fluoranthene	610	27.2	BPA TP-1a	12/7/99	No	NA		610	0.018	HD-B41RAA16-CS-004-4.5/5.5-0	9/22/11	No	210		No	✓	
Beryllium	320	225	WPL-SG-33a	12/29/99	No	NA		320	2.3	HD-B41RAA17-CS-001-11.5/12.5-0	10/5/11	No	230		No	✓	
Beta-BHC	0.82	ND	NA	NA	No	NA		0.88	—	—	—	—	1.3			✓	
Beta-Endosulfan [3]	260	ND	NA	NA	No	NA		260	—	—	—	—	700			✓	
Bis(2-Chloroethoxy) Methane	31	ND	NA	NA	No	NA		29	ND	NA	NA	No	250			✓	
Bis(2-Chloroethyl) Ether	0.076	ND	NA	NA	No	NA		0.076	ND	NA	NA	No	1			✓	
Bis(2-Chloroisopropyl) Ether	30	ND	NA	NA	No	NA		30	ND	NA	NA	No	4700			✓	
Bis(2-ethylhexyl) phthalate	130	8.4	WPL TP-3	11/26/99	No	NA		130	3.4	HD-IWTP031-CS-004-11/12-0	10/5/11	No	160		No	✓	
Bromochloromethane	9	0.0004	HD-WPL-SB-017-04-0 HD-WPL-SB-036-04-0	2/13/04 2/17/04	No	NA		9	ND	NA	NA	No	63		No	✓	
Bromodichloromethane	8	0.027	TANK 3 NW 7.5	11/7/00	No	NA		8	ND	NA	NA	No	1.3		No	✓	
Bromoform	8	ND	NA	NA	No	NA		8	ND	NA	NA	No	86			✓	
Bromomethane	1	ND	NA	NA	No	NA		1	ND	NA	NA	No	3			✓	
Butylbenzylphthalate	10000	0.2	HD-B41S-SB-007-03-0	2/7/08	No	NA		10000	0.38	HD-IWTP031-CS-004-11/12-0	10/5/11	No	1200		Yes	✓	
Cadmium	38	224	WPL-SG-33a	12/29/99	Yes	80	**YES - COC**	38	36.9	HD-B41-TR-1A-5/5.5-0	1/21/09	No	10		No		✓
Calcium*	NA	3910	BG-27	6/4/98	No	NA		NA	—	—	—	—	NA		No	✓	
Carbazole	83	9.6	WPL TP-5	11/26/99	No	NA		89	0.12	HD-B41RAA16-CS-003-5/6-0	9/22/11	No	NA		No	✓	
Carbon Disulfide	620	0.0072	HD-B41S-SB-012-02-0	2/8/08	No	NA		620	0.0025	HD-B41-TR-1J-9.5/10-0	2/2/09	No	350		No	✓	
Carbon Tetrachloride	0.5	ND	NA	NA	No	NA		0.5	ND	NA	NA	No	2.9			✓	
Chlordane [4]	49	ND	NA	NA	No	NA		49	—	—	—	—	7.7			✓	
Chlorobenzene	10	1.2	HD-WPL-SB-023-12-0	2/12/04	No	NA		10	ND	NA	NA	No	130		No	✓	
Chlorodibromomethane	8	ND	NA	NA	No	NA		8	ND	NA	NA	No	39			✓	
Chloroethane	90	ND	NA	NA	No	NA		8800	ND	NA	NA	No	2300			✓	
Chloroform	8	0.0061	SB-14-14	10/19/00	No	NA		8	ND	NA	NA	No	1.4		No	✓	
Chloromethane	3	ND	NA	NA	No	NA		3	ND	NA	NA	No	46			✓	
Chromium	190	8200	WPL-15-B-3	7/23/91	Yes	5.6	**YES - COC**	190	210	HD-B41RAA16-CS-001-5/6-0	9/22/11	Yes	6.3	Yes	No		✓
Chrysene	230	54	WPL TP-5	11/26/99	No	NA		230	0.09	HD-IWTP031-CS-004-11/12-0	10/5/11	No	2100		No	✓	
cis-1,2-Dichloroethene	7	40	HD-WPL-SB-055-07-0	3/10/04	Yes	200	No	7	37	HD-B41RAA16-CS-001-5/6-0	9/22/11	Yes	37	No	No		✓

TABLE 4.1-7
Screening of Soil Data - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	PADEP MSC Screening Level (mg/kg)	Maximum Detected (mg/kg)	Maximum Detected Sample Location	Date Sampled	Is Maximum Concentration > MSC Screening Level?	USEPA RSL (mg/kg)	Is Maximum Detected Concentration > RSL?	Is Post-Soils RA Maximum > Soils RA Maximum?	Attainment Under SHS	Attainment Under SSS
cis-1,3-Dichloropropene	2.6	0.0088	SB-14-14	10/19/00	No	NA		2.7	ND	NA	NA	No	8.2		No	✓	
Cobalt	140	6.52	BG-28	6/4/98	No	NA		130	—	—	—	—	35		No	✓	
Copper	43000	3500	HD-WPL-TP-037-05-0	2/27/04	No	NA		43000	33	HD-IWTP037-CS-003-11/12-0	10/4/11	No	4700		No	✓	
Cyanide, Free	200	12.6	HD-B41N-TP-1D-2.5/3-0	12/23/08	No	NA		200	5.3	HD-B41-TR-2-4.5/5-5	1/29/09	No	15		No	✓	
Cyanide, Total	200	174	HD-B41N-TP-1J-4/4.5-0	2/4/09	No	NA		200	17.5	HD-B41-TR-2-4.5/5-5	1/29/09	No	15		No	✓	
Delta-BHC	NA	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
Dibenzo(a,h)anthracene	160	15	WPL TP-5	11/26/99	No	NA		270	ND	NA	NA	No	2.1		No	✓	
Dibenzofuran	260	4.4	WPL TP-5	11/26/99	No	NA		250	0.27	HD-B41RAA16-CS-003-5/6-0	9/22/11	No	120		No	✓	
Dieldrin	0.44	ND	NA	NA	No	NA		0.47	—	—	—	—	0.14			✓	
Diethylphthalate	8200	0.37	HD-B41N-TP-1G-4/4.5-1	12/23/08	No	NA		7800	ND	NA	NA	No	66000		No	✓	
Dimethylphthalate	NA	0.066	HD-FCSA-SB-003-02-0	5/7/07	No	NA	**YES - COC**	NA	ND	NA	NA	No	NA		No	✓	
Di-n-Butylphthalate	4100	1.1	HD-WPL-SB-040-02-0	2/13/04	No	NA		4000	2.3	HD-IWTP031-CS-004-11/12-0	10/5/11	No	8200		Yes	✓	
Di-n-octylphthalate	10000	0.042	HD-B41S-SB-S7N-11	4/2/08	No	NA		10000	ND	NA	NA	No	820		No	✓	
Endosulfan Sulfate	70	ND	NA	NA	No	NA		70	—	—	—	—	490			✓	
Endrin	5.5	ND	NA	NA	No	NA		5.5	—	—	—	—	25			✓	
Endrin Aldehyde	NA	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
Ethylbenzene	70	27	OWCA-SP-5	4/27/95	No	NA		70	17	HD-B45T-SB-005-11.1/11.6-0	5/4/11	No	25		No	✓	
Fluoranthene	3200	110	WPL TP-5	11/26/99	No	NA		3200	0.25	HD-B41-TR-1K-9.5/10-0	2/2/09	No	3000		No	✓	
Fluorene	3800	12	WPL TP-5	11/26/99	No	NA		3800	0.075	HD-IWTP031-CS-004-11/12-0	10/5/11	No	3000		No	✓	
Heptachlor	0.68	ND	NA	NA	No	NA		0.68	—	—	—	—	0.63			✓	
Heptachlor Epoxide	1.1	ND	NA	NA	No	NA		1.1	—	—	—	—	0.33			✓	
Hexachlorobenzene	0.96	4.36	BPA TP-1a	12/7/99	Yes	1.1	**YES - COC**	0.96	ND	NA	NA	No	0.96		No		✓
Hexachlorobutadiene	39	ND	NA	NA	No	NA		42	ND	NA	NA	No	5.3			✓	
Hexachlorocyclopentadiene	91	ND	NA	NA	No	NA		91	ND	NA	NA	No	0.75			✓	
Hexachloroethane	0.56	ND	NA	NA	No	NA		0.56	ND	NA	NA	No	8			✓	
Hexavalent Chromium	190	122	HD-B41S-SB-010-02-0	2/8/08	No	NA		190	4.6	HD-B41-TR-1A-5/5.5-0	1/21/09	No	6.3		No	✓	
Indeno(1,2,3-cd)pyrene	28000	43	WPL TP-5	11/26/99	No	NA		18000	0.16	HD-B41RAA16-CS-004-4.5/5.5-0 HD-B41RAA16-CS-011-6/7-0	9/22/11 10/19/11	No	21		No	✓	
Iron	190000	15800	BG-27	6/4/98	No	NA		190000	—	—	—	—	82000		No	✓	
Isophorone	10	0.16	HD-WPL-SB-074-02-0	3/12/04	No	NA		10	ND	NA	NA	No	2400		No	✓	
Isopropylbenzene	—	—	—	—	—	—		2500	6.8	HD-B45T-SB-005-11.1/11.6-0	5/4/11	No	990		Yes	✓	
Lead	450	2760	HD-WPL-TP-037-05-0	2/27/04	Yes	800	**YES - COC**	450	44	HD-B41RAA17-CS-001-11.5/12.5-0	10/5/11	No	800		No		✓
Lindane (Gamma-BHC)	0.072	ND	NA	NA	No	NA		0.072	—	—	—	—	1			✓	
m,p-Xylene [5]	1000	ND	NA	NA	No	NA		1000	—	—	—	—	250			✓	
Magnesium*	NA	1280	BG-28	6/4/98	No	NA		NA	—	—	—	—	NA		No	✓	
Manganese	2000	327	BG-28	6/4/98	No	NA		2000	—	—	—	—	2600		No	✓	
Mercury	10	6	HD-WPL-SB-030-02-0	2/12/04	No	NA		10	0.12	HD-B41RAA16-CS-014-6/7-0	10/19/11	No	4.6		No	✓	
Methyl tert-butyl ether	2	ND	NA	NA	No	NA		2	ND	NA	NA	No	210			✓	
Methylene chloride	0.5	0.1	HD-B41S-SB-S7N-11	4/2/08	No	NA		0.5	0.17	HD-IWTP031-CS-002-11/12-0	10/5/11	No	320		Yes	✓	
Naphthalene	25	11	HD-WPL-TP-037-05-0	2/27/04	No	NA		25	25	HD-B45T-SB-005-11.1/11.6-0	5/4/11	No	8.6		Yes	✓	
Nickel	650	1500	BLD2-Tank 6 N	1/1/00	Yes	2000	No	650	292	HD-B41-TR-1K-9.5/10-0	2/2/09	No	2200		No		✓
Nitrobenzene	20	0.88	HD-WPL-SB-106-01-0	4/23/07	No	NA		0.63	ND	NA	NA	No	22		No	✓	
N-Nitrosodi-n-propylamine	0.037	0.075	HD-B41S-SB-007-03-0	2/7/08	Yes	0.25	No	0.013	ND	NA	NA	No	0.33		No		✓
N-Nitrosodiphenylamine	83	ND	NA	NA	No	NA		15	ND	NA	NA	No	470			✓	
o-Xylene [5]	1000	ND	NA	NA	No	NA		1000	—	—	—	—	280			✓	
Pentachlorophenol	5	4.2	HD-WPL-SB-120-02-0	4/19/07	No	NA		5	ND	NA	NA	No	4		No	✓	
Phenanthrene	10000	61	WPL TP-5	11/26/99	No	NA		10000	0.32	HD-IWTP031-CS-004-11/12-0	10/5/11	No	NA		No	✓	
Phenol	200	0.41	HD-WPL-SB-061-06-0	3/11/04	No	NA		200	ND	NA	NA	No	25000		No	✓	
Potassium*	NA	2810	BG-28	6/4/98	No	NA		NA	—	—	—	—	NA		No	✓	
Pyrene	2200	120	WPL TP-5	11/26/99	No	NA		2200	0.21	HD-B41-TR-1K-9.5/10-0 HD-IWTP031-CS-004-11/12-0	2/2/09 10/5/11	No	2300		No	✓	
Selenium	26	194	WPL-SG-33a	12/29/99	Yes	510	No	26	1.7	HD-IWTP037-CS-003-11/12-0	10/4/11	No	580		No		✓

TABLE 4.1-7
Screening of Soil Data - West Campus 0 to 15 Feet Below Ground Surface
Former York Naval Ordnance Plant - York, PA

	2012 Soils Risk Assessment (RA) Data (1987-2008)							Post-Soils Risk Assessment (RA) Data (2009-Present)							2022 Evaluation		
Analyte	**PADEP MSC Screening Level (mg/kg)**	**Maximum Detected (mg/kg)**	**Maximum Detected Sample Location**	**Date Sampled**	**Is Maximum Concentration > MSC Screening Level?**	**USEPA RSL (mg/kg)**	**Is Maximum Detected Concentration > RSL?**	**PADEP MSC Screening Level (mg/kg)**	**Maximum Detected (mg/kg)**	**Maximum Detected Sample Location**	**Date Sampled**	**Is Maximum Concentration > MSC Screening Level?**	**USEPA RSL (mg/kg)**	**Is Maximum Detected Concentration > RSL?**	**Is Post-Soils RA Maximum > Soils RA Maximum?**	**Attainment Under SHS**	**Attainment Under SSS**
Silver	84	225	WPL-SG-33a	12/29/99	Yes	510	No	84	0.1	HD-B41-TR-1E-10.5/11-0	2/2/09	No	580		No		✓
Sodium*	NA	ND	NA	NA	No	NA		NA	—	—	—	—	NA			✓	
Styrene	24	0.027	OWCA-SP-5	4/27/95	No	NA		24	ND	NA	NA	No	3500		No	✓	
Tetrachloroethene	0.5	1400	HD-B4ND-SB-014-15-0	7/23/07	Yes	2.6	**YES - COC**	0.5	2100	HD-IWTP031-CS-004-11/12-0	10/5/11	Yes	39	Yes	Yes		✓
Thallium	14	212	WPL-SG-33a	12/29/99	Yes	1	**YES - COC**	14	0.23	HD-B41-TR-1E-10.5/11-0 HD-B41-TR-1G-10.5/11-0	2/2/09 2/2/09	No	1.2		No		✓
Toluene	100	131.25	WPL-15-B-3	7/23/91	Yes	4500	No	100	28	HD-B45T-SB-005-11.1/11.6-0	5/4/11	No	4700		No		✓
Toxaphene	1.2	ND	NA	NA	No	NA		1.2	—	—	—	—	2.1			✓	
trans-1,2-Dichloroethene	10	0.275	OWCA-CB-9	4/27/88	No	NA		10	5.1	HD-B41RAA16-CS-001-5/6-0	9/22/11	No	30		Yes	✓	
trans-1,3-Dichloropropene [6]	2.6	0.0096	SB-14-14	10/19/00	No	NA		2.7	ND	NA	NA	No	8.2		No	✓	
Trichloroethene	0.5	460	HD-B4ND-SB-014-15-0	7/23/07	Yes	6.4	**YES - COC**	0.5	940	HD-B4ND-CS-007-12/13-0	10/26/11	Yes	1.9	Yes	Yes		✓
Trichlorofluoromethane	200	ND	NA	NA	No	NA		200	—	—	—	—	35000			✓	
Vanadium	72000	53.9	HD-WPL-SB-111-11-0	4/19/07	No	NA		680	26.8	HD-B41-TR-1K-9.5/10-0	2/2/09	No	580		No	✓	
Vinyl Acetate	180	ND	NA	NA	No	NA		180	—	—	—	—	380			✓	
Vinyl Chloride	0.2	0.63	HD-B41S-SB-004-03-0	2/8/08	Yes	1.7	No	0.2	16	HD-B41RAA16-CS-001-5/6-0	9/22/11	Yes	1.7	Yes	Yes		✓
Xylenes (Total)	1000	100	OWCA-SP-7	4/26/95	No	NA		1000	130	HD-B45T-SB-005-11.1/11.6-0	5/4/11	No	250		Yes	✓	
Zinc	12000	37000	WPL-15-B-3	7/23/91	Yes	31000	**YES - COC**	12000	130	HD-B41-TR-1A-5/5.5-0	1/21/09	No	35000		No		✓

Notes:
* Essential Nutrient
— Substance Not Analyzed in Samples
NA - Not Applicable
ND - Not Detected
mg/kg - Milligrams per kilogram
PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Industrial Soil (TR = $1x10^{-6}$ and THQ=0.1)
SHS - Statewide health standard
SSS - Site-specific standard
Post-Soils Risk Assessment USEPA RSLs are current as of November 2022
[1] Using RSL for cis-1,2-Dichloroethene (CASRN 156-59-2)
[2] Using MSC screening level and RSL for p-Cresol (4-methylphenol) (CASRN 106-44-5)
[3] Using RSL for Endosulfan (CASRN 115-29-7)
[4] Using RSL for Chlordane (technical mixture) (CASRN 12789-03-6)
[5] Using MSC screening level for Xylenes (total) (CASRN 1330-20-7)
[6] Using MSC screening level and RSL for 1,3-Dichloropropene (CASRN 542-75-6)

TABLE 4.2-1
Physical Well Data Table
Former York Naval Ordnance Plant - York, PA

Well Identification	Type	Status	Depth to Top of Open Interval (feet bgs)	Depth to Base of Open Interval (feet bgs)	Open Interval Length (feet)	Open Interval in Overburden or Bedrock	Site Location	Well Located Inside Technical Impracticability Boundary (yes/no)
CW-1	Collection Well	Inactive	68.0	175.0	107.0	Bedrock	NPBA	No
CW-1A	Collection Well	Inactive	29.0	74.0	45.0	Bedrock	NPBA	No
CW-2	Collection Well	Inactive	48.0	150.0	102.0	Bedrock	NPBA	No
CW-3	Collection Well	Inactive	20.0	203.0	183.0	Bedrock	NPBA	No
CW-4	Collection Well	Inactive	63.0	150.0	87.0	Bedrock	NPBA	No
CW-5	Collection Well	Inactive	18.5	83.0	64.5	Bedrock	NPBA	No
CW-6	Collection Well	Inactive	30.0	145.0	115.0	Bedrock	NPBA	No
CW-7	Collection Well	Inactive	61.0	150.0	89.0	Bedrock	NPBA	No
CW-7A	Collection Well	Inactive	34.0	66.0	32.0	Overburden and Bedrock	NPBA	No
CW-9	Collection Well	Inactive	47.0	50.0	3.0	Bedrock	SW-WPL	Yes
CW-13	Collection Well	Inactive	59.6	70.0	10.4	Bedrock	WPL	Yes
CW-14	Collection Well	Inactive	36.0	80.0	44.0	Bedrock	NW-WPL	Yes
CW-15	Collection Well	Inactive	55.0	270.0	215.0	Overburden and Bedrock	WPL	Yes
CW-15A	Collection Well	Inactive	18.0	68.0	50.0	Overburden and Bedrock	WPL	Yes
CW-16	Collection Well	Inactive	25.0	52.0	27.0	Bedrock	Former Central Plant Area	Yes
CW-17	Collection Well	Inactive	32.0	65.0	33.0	Bedrock	NW-WPL	Yes
CW-20	Collection Well	Inactive	205.0	215.0	10.0	Bedrock	WPL	Yes
CW-21	Collection Well	Active	49.5	100.0	50.5	Bedrock	SPBA	Yes
CW-22	Collection Well	Active	64.0	100.0	36.0	Bedrock	SPBA	Yes
CW-23	Collection Well	Active	34.0	61.0	27.0	Bedrock	WPL	Yes
MPE-1	Monitoring Well	Active	32.0	50.0	18.0	Overburden	SPBA	Yes
MPE-2	Monitoring Well	Active	35.0	66.0	31.0	Overburden	SPBA	Yes
MPE-3	Monitoring Well	Active	27.0	43.0	16.0	Overburden	SPBA	Yes
MW-1	Monitoring Well	Active	39.0	54.0	15.0	Bedrock	SPA	No
MW-2	Monitoring Well	Active	46.0	121.0	75.0	Bedrock	Eastern Site Perimeter	No
MW-3	Monitoring Well	Active	50.0	102.0	52.0	Bedrock	NPBA	No
MW-5	Monitoring Well	Active	10.0	53.0	43.0	Overburden and Bedrock	Northern Site Perimeter	No
MW-6	Monitoring Well	Active	7.0	40.0	33.0	Overburden and Bedrock	Northern Site Perimeter	No
MW-7	Monitoring Well	Active	13.0	35.0	22.0	Overburden and Bedrock	WPL	Yes
MW-8	Monitoring Well	Active	10.0	36.0	26.0	Overburden and Bedrock	WPL	Yes
MW-9	Monitoring Well	Active	59.0	97.0	38.0	Bedrock	NPBA	No
MW-10	Monitoring Well	Active	78.0	120.0	42.0	Bedrock	NPBA	No
MW-11	Monitoring Well	Active	20.0	74.0	54.0	Overburden and Bedrock	NPBA	No
MW-12	Monitoring Well	Active	30.0	100.0	70.0	Bedrock	NPBA	No
MW-14	Monitoring Well	Active	18.0	80.0	62.0	Bedrock	Eastern Site Perimeter	No
MW-15	Monitoring Well	Active	40.0	120.0	80.0	Bedrock	EPBA	Yes
MW-16D	Monitoring Well	Active	190.0	201.0	11.0	Bedrock	NPBA	No
MW-16S	Monitoring Well	Active	98.0	110.0	12.0	Bedrock	NPBA	No
MW-17	Monitoring Well	Active	15.0	79.0	64.0	Overburden and Bedrock	EPBA	No
MW-18D	Monitoring Well	Active	130.0	140.0	10.0	Bedrock	NPBA	No
MW-18S	Monitoring Well	Active	45.0	65.0	20.0	Bedrock	NPBA	No
MW-19	Monitoring Well	Active	30.0	120.0	90.0	Bedrock	Former NETT	Yes
MW-20D	Monitoring Well	Active	153.0	165.0	12.0	Bedrock	NPBA	No
MW-20M	Monitoring Well	Active	72.0	85.0	13.0	Bedrock	NPBA	No
MW-20S	Monitoring Well	Active	28.0	61.0	33.0	Bedrock	NPBA	No
MW-22	Monitoring Well	Active	30.0	100.0	70.0	Bedrock	SPBA	No
MW-26	Monitoring Well	Active	7.0	60.0	53.0	Overburden	Former NETT	Yes
MW-28	Monitoring Well	Active	8.0	55.0	47.0	Overburden and Bedrock	Former TCA Tank Area	Yes
MW-30	Monitoring Well	Active	14.0	23.0	9.0	Overburden and Bedrock	West Building 41	Yes
MW-31D	Monitoring Well	Active	66.0	81.0	15.0	Bedrock	North Building 41	Yes
MW-31S	Monitoring Well	Active	12.0	36.0	24.0	Overburden	North Building 41	Yes
MW-32D	Monitoring Well	Active	196.0	220.0	24.0	Bedrock	Former TCA Tank Area	Yes
MW-32S	Monitoring Well	Active	133.0	148.0	15.0	Bedrock	Former TCA Tank Area	Yes
MW-36D	Monitoring Well	Active	67.0	83.0	16.0	Bedrock	West Building 41	Yes

TABLE 4.2-1
Physical Well Data Table
Former York Naval Ordnance Plant - York, PA

Well Identification	Type	Status	Depth to Top of Open Interval (feet bgs)	Depth to Base of Open Interval (feet bgs)	Open Interval Length (feet)	Open Interval in Overburden or Bedrock	Site Location	Well Located Inside Technical Impracticability Boundary (yes/no)
MW-36S	Monitoring Well	Active	18.0	41.0	23.0	Overburden and Bedrock	West Building 41	Yes
MW-37D	Monitoring Well	Active	125.0	141.0	16.0	Bedrock	SW-WPL	Yes
MW-37S	Monitoring Well	Active	11.0	33.0	22.0	Overburden and Bedrock	SW-WPL	Yes
MW-38D	Monitoring Well	Active	80.0	103.0	23.0	Bedrock	WPL	Yes
MW-39D	Monitoring Well	Active	53.0	100.0	47.0	Bedrock	NW-WPL	Yes
MW-39S	Monitoring Well	Active	3.0	30.0	27.0	Overburden and Bedrock	NW-WPL	Yes
MW-40S	Monitoring Well	Active	26.0	47.0	21.0	Bedrock	SPA	No
MW-40D	Monitoring Well	Active	78.0	103.0	25.0	Bedrock	SPA	No
MW-43D	Monitoring Well	Active	79.0	92.0	13.0	Bedrock	SPA	No
MW-43S	Monitoring Well	Active	19.0	48.0	29.0	Overburden and Bedrock	SPA	No
MW-45	Monitoring Well	Active	6.0	38.0	32.0	Overburden and Bedrock	Former West Building 4	Yes
MW-46	Monitoring Well	Active	6.0	39.0	33.0	Overburden and Bedrock	Former West Building 4	Yes
MW-47	Monitoring Well	Active	12.0	56.0	44.0	Overburden	Former West Building 4	Yes
MW-49D	Monitoring Well	Active	201.0	220.0	19.0	Bedrock	Former North Building 4	Yes
MW-49S	Monitoring Well	Active	134.0	158.0	24.0	Bedrock	Former North Building 4	Yes
MW-50D	Monitoring Well	Active	157.0	170.0	13.0	Bedrock	Former North Building 4	Yes
MW-50S	Monitoring Well	Active	104.0	125.0	21.0	Bedrock	Former North Building 4	Yes
MW-51D	Monitoring Well	Active	88.0	120.0	32.0	Bedrock	Former North Building 4	Yes
MW-51S	Monitoring Well	Active	34.0	51.0	17.0	Bedrock	Former North Building 4	Yes
MW-56	Monitoring Well	Active	20.0	37.0	17.0	Overburden	East of Former Building 46	Yes
MW-57	Monitoring Well	Active	25.0	35.0	10.0	Overburden	Former Building 58	Yes
MW-64D	Monitoring Well	Active	68.0	77.0	9.0	Bedrock	SPBA	Yes
MW-64S	Monitoring Well	Active	33.0	42.0	9.0	Overburden	SPBA	Yes
MW-65D	Monitoring Well	Active	89.0	103.0	14.0	Bedrock	Eastern Site Perimeter	No
MW-65S	Monitoring Well	Active	71.3	86.0	14.7	Bedrock	Eastern Site Perimeter	No
MW-66D	Monitoring Well	Active	81.4	100.0	18.6	Bedrock	EPBA	No
MW-66S	Monitoring Well	Active	47.2	61.6	14.4	Bedrock	EPBA	No
MW-67D	Monitoring Well	Active	58.0	71.0	13.0	Bedrock	South-Central Site Area	No
MW-67S	Monitoring Well	Active	12.8	31.0	18.2	Overburden	South-Central Site Area	No
MW-68	Monitoring Well	Active	80.0	105.0	25.0	Bedrock	South-Central Site Area	No
MW-69	Monitoring Well	Active	77.0	126.0	49.0	Bedrock	South-Central Site Area	No
MW-70D	Monitoring Well	Active	68.0	85.0	17.0	Bedrock	Former NETT	Yes
MW-70S	Monitoring Well	Active	15.8	35.0	19.2	Overburden	Former NETT	Yes
MW-74D	Monitoring Well	Active	220.0	250.0	30.0	Bedrock	NW-WPL	Yes
MW-74S	Monitoring Well	Active	175.0	201.0	26.0	Bedrock	NW-WPL	Yes
MW-75D	Monitoring Well	Active	200.0	217.0	17.0	Bedrock	SW-WPL	Yes
MW-75S	Monitoring Well	Active	151.0	190.0	39.0	Bedrock	SW-WPL	Yes
MW-77	Monitoring Well	Active	35.0	67.0	32.0	Overburden	Petroleum Plume Area	Yes
MW-78	Monitoring Well	Active	7.5	39.0	31.5	Overburden	NPA	Yes
MW-79	Monitoring Well	Active	17.0	42.0	25.0	Overburden	South-Central Site Area	No
MW-80	Monitoring Well	Active	17.5	41.0	23.5	Overburden	Former Building 58	Yes
MW-81S	Monitoring Well	Active	28.0	43.0	15.0	Overburden and Bedrock	Former CPA	Yes
MW-81D	Monitoring Well	Active	52.0	66.0	14.0	Bedrock	Former CPA	Yes
MW-82	Monitoring Well	Active	53.5	76.0	22.5	Bedrock	Northern Site Perimeter	No
MW-84	Monitoring Well	Active	67.0	98.0	31.0	Bedrock	NPA	Yes
MW-85	Monitoring Well	Active	120.0	150.0	30.0	Bedrock	South-Central Site Area	No
MW-87	Monitoring Well	Active	67.0	98.0	31.0	Overburden and Bedrock	Former Building 58	Yes
MW-88	Monitoring Well	Active	30.0	50.0	20.0	Bedrock	South-Central Site Area	No
MW-91	Monitoring Well	Active	50.0	75.0	25.0	Bedrock	EPBA	Yes
MW-92	Monitoring Well	Active	50.0	100.5	50.5	Bedrock	EPBA	Yes
MW-93D	Monitoring Well	Active	134.7	160.0	25.3	Bedrock	SW-WPL	Yes
MW-93S	Monitoring Well	Active	24.0	45.0	21.0	Bedrock	SW-WPL	Yes
MW-95	Monitoring Well	Active	37.0	49.5	12.5	Bedrock	NW-WPL	Yes

TABLE 4.2-1
Physical Well Data Table
Former York Naval Ordnance Plant - York, PA

Well Identification	Type	Status	Depth to Top of Open Interval (feet bgs)	Depth to Base of Open Interval (feet bgs)	Open Interval Length (feet)	Open Interval in Overburden or Bedrock	Site Location	Well Located Inside Technical Impracticability Boundary (yes/no)
MW-96D	Monitoring Well	Active	75.0	87.5	12.5	Bedrock	NW-WPL	Yes
MW-96S	Monitoring Well	Active	27.0	39.0	12.0	Bedrock	NW-WPL	Yes
MW-97	Monitoring Well	Active	66.0	80.0	14.0	Bedrock	WPL	Yes
MW-98D	Monitoring Well	Active	128.0	171.0	43.0	Bedrock	Levee Area	Yes
MW-98I	Monitoring Well	Active	98.0	105.0	7.0	Bedrock	Levee Area	Yes
MW-98S	Monitoring Well	Active	58.0	68.0	10.0	Bedrock	Levee Area	Yes
MW-99D	Monitoring Well	Active	125.5	142.0	16.5	Bedrock	Levee Area	Yes
MW-99S	Monitoring Well	Active	57.8	74.3	16.5	Bedrock	Levee Area	Yes
MW-100D	Monitoring Well	Active	93.0	114.0	21.0	Bedrock	Levee Area	Yes
MW-100I	Monitoring Well	Active	60.0	66.0	6.0	Bedrock	Levee Area	Yes
MW-100S	Monitoring Well	Active	45.0	51.0	6.0	Bedrock	Levee Area	Yes
MW-101D	Monitoring Well	Active	76.0	115.0	39.0	Bedrock	Levee Area	No
MW-101S	Monitoring Well	Active	18.0	40.0	22.0	Overburden and Bedrock	Levee Area	No
MW-102D	Monitoring Well	Active	75.0	99.0	24.0	Bedrock	Former NETT	Yes
MW-102S	Monitoring Well	Active	41.0	65.0	24.0	Overburden	Former NETT	Yes
MW-103D	Monitoring Well	Active	94.7	106.7	12.0	Bedrock	Former NETT	Yes
MW-103S	Monitoring Well	Active	62.3	87.5	25.2	Overburden	Former NETT	Yes
MW-105	Monitoring Well	Active	10.0	22.0	12.0	Overburden	NW-WPL	Yes
MW-106	Monitoring Well	Active	15.0	28.0	13.0	Overburden	WPL	Yes
MW-107	Monitoring Well	Active	11.0	23.0	12.0	Overburden	SW-WPL	Yes
MW-108D	Monitoring Well	Active	72.0	149.0	77.0	Bedrock	SPBA	No
MW-108S	Monitoring Well	Active	22.9	55.1	32.2	Overburden	SPBA	No
MW-109D	Monitoring Well	Active	88.0	100.0	12.0	Bedrock	SPA	No
MW-109S	Monitoring Well	Active	42.9	65.0	22.1	Overburden	SPA	No
MW-110	Monitoring Well	Active	31.5	44.0	12.5	Bedrock	SPA	No
MW-111	Monitoring Well	Active	82.0	149.0	67.0	Bedrock	South-Central Site Area	No
MW-112	Monitoring Well	Active	97.5	120.0	22.5	Bedrock	South-Central Site Area	No
MW-113	Monitoring Well	Active	125.0	151.0	26.0	Bedrock	Former Building 58	Yes
MW-114	Monitoring Well	Active	90.0	143.7	53.7	Bedrock	Former CPA	Yes
MW-115	Monitoring Well	Active	111.5	124.5	13.0	Bedrock	South-Central Site Area	No
MW-116	Monitoring Well	Active	27.0	50.8	23.8	Overburden and Bedrock	North Building 41	Yes
MW-126	Monitoring Well	Active	35.0	62.0	27.0	Bedrock	Former Building 58	Yes
MW-127	Monitoring Well	Active	57.7	82.0	24.3	Bedrock	Former Building 58	Yes
MW-128	Monitoring Well	Active	49.0	73.0	24.0	Bedrock	Former Building 58	Yes
MW-129	Monitoring Well	Active	40.0	64.0	24.0	Bedrock	Former Building 58	Yes
MW-131	Monitoring Well	Active	24.0	46.0	22.0	Overburden and Bedrock	Former CPA	Yes
MW-134	Monitoring Well	Active	42.0	65.0	23.0	Bedrock	Former West Building 2	Yes
MW-136A (270-348)	Waterloo Monitoring Well	Active	270.0	348.0	78.0	Bedrock	SW-WPL	Yes
MW-136A (356-356.5)	Waterloo Monitoring Well	Active	351.0	365.5	14.5	Bedrock	SW-WPL	Yes
MW-136A (372.5-373)	Waterloo Monitoring Well	Active	368.5	378.0	9.5	Bedrock	SW-WPL	Yes
MW-136A (434-434.5)	Waterloo Monitoring Well	Active	429.0	438.5	9.5	Bedrock	SW-WPL	Yes
MW-136A (459.5-460)	Waterloo Monitoring Well	Active	441.5	467.0	25.5	Bedrock	SW-WPL	Yes
MW-137A (295.5-296)	Waterloo Monitoring Well	Active	270.0	306.0	36.0	Bedrock	Former TCA Tank Area	Yes
MW-137A (343-343.5)	Waterloo Monitoring Well	Active	340.0	350.5	10.5	Bedrock	Former TCA Tank Area	Yes
MW-137A (374.5-375)	Waterloo Monitoring Well	Active	369.5	384.0	14.5	Bedrock	Former TCA Tank Area	Yes
MW-137A (420-420.5)	Waterloo Monitoring Well	Active	415.0	426.5	11.5	Bedrock	Former TCA Tank Area	Yes
MW-137A (434.5-435)	Waterloo Monitoring Well	Active	429.5	452.0	22.5	Bedrock	Former TCA Tank Area	Yes
MW-138A	Monitoring Well	Active	260.0	320.0	60.0	Bedrock	Former Building 58	Yes
MW-139A (305-305.5)	Waterloo Monitoring Well	Active	295.0	325.5	30.5	Bedrock	Former North Building 4	Yes
MW-139A (333.5-334)	Waterloo Monitoring Well	Active	328.5	357.0	28.5	Bedrock	Former North Building 4	Yes
MW-139A (365-365.5)	Waterloo Monitoring Well	Active	360.0	370.5	10.5	Bedrock	Former North Building 4	Yes
MW-139A (421.5-422)	Waterloo Monitoring Well	Active	416.5	426.0	9.5	Bedrock	Former North Building 4	Yes
MW-139A (454-454.5)	Waterloo Monitoring Well	Active	452.0	470.0	18.0	Bedrock	Former North Building 4	Yes

TABLE 4.2-1
Physical Well Data Table
Former York Naval Ordnance Plant - York, PA

Well Identification	Type	Status	Depth to Top of Open Interval (feet bgs)	Depth to Base of Open Interval (feet bgs)	Open Interval Length (feet)	Open Interval in Overburden or Bedrock	Site Location	Well Located Inside Technical Impracticability Boundary (yes/no)
MW-140A (209.5-210)	Waterloo Monitoring Well	Active	205.0	215.0	10.0	Bedrock	Former East Building 2	Yes
MW-140A (285-285.5)	Waterloo Monitoring Well	Active	278.5	289.3	10.8	Bedrock	Former East Building 2	Yes
MW-140A (323.5-324)	Waterloo Monitoring Well	Active	318.5	326.0	7.5	Bedrock	Former East Building 2	Yes
MW-140A (372-372.5)	Waterloo Monitoring Well	Active	367.0	378.5	11.5	Bedrock	Former East Building 2	Yes
MW-140A (407.5-408)	Waterloo Monitoring Well	Active	402.5	416.0	13.5	Bedrock	Former East Building 2	Yes
MW-141A	Monitoring Well	Active	200.0	300.0	100.0	Bedrock	SPBA	Yes
MW-142D	Monitoring Well	Active	122.0	145.4	23.4	Bedrock	NPBA	No
MW-142S	Monitoring Well	Active	56.0	70.0	14.0	Bedrock	NPBA	No
MW-143D	Monitoring Well	Active	117.4	134.0	16.6	Bedrock	NPBA	No
MW-143S	Monitoring Well	Active	24.0	54.5	30.5	Overburden	NPBA	No
MW-144	Monitoring Well	Active	12.0	24.0	12.0	Overburden	Levee Area	Yes
MW-145A	Monitoring Well	Active	200.0	250.0	50.0	Bedrock	Levee Area	Yes
MW-146	Monitoring Well	Active	13.0	25.0	12.0	Overburden	Levee Area	Yes
MW-147A	Monitoring Well	Active	200.0	250.0	50.0	Bedrock	Levee Area	Yes
MW-148A (72.5-73)	Waterloo Monitoring Well	Active	67.0	78.0	11.0	Bedrock	West Side Codorus Creek	No
MW-148A (136-136.5)	Waterloo Monitoring Well	Active	130.0	140.5	10.5	Bedrock	West Side Codorus Creek	No
MW-148A (218-218.5)	Waterloo Monitoring Well	Active	210.7	221.0	10.3	Bedrock	West Side Codorus Creek	No
MW-150	Monitoring Well	Active	147.5	200.0	52.5	Bedrock	SPA	No
MW-151	Monitoring Well	Active	20.2	72.0	51.8	Bedrock	SPA	No
MW-152 (23-23.5)	Waterloo Monitoring Well	Active	13.0	30.5	17.5	Overburden and Bedrock	Giambalvo Property	No
MW-152 (137.5-138)	Waterloo Monitoring Well	Active	122.5	200.0	77.5	Bedrock	Giambalvo Property	No
MW-155	Monitoring Well	Active	10.5	24.0	13.5	Bedrock	Levee Area	Yes
MW-156	Monitoring Well	Active	4.0	22.0	18.0	Overburden	Levee Area	Yes
MW-161	Monitoring Well	Active	53.0	65.7	12.7	Overburden	SPBA	Yes
MW-162R	Monitoring Well	Active	30.0	70.0	40.0	Overburden and Bedrock	SPBA	Yes
MW-163	Monitoring Well	Active	32.8	55.0	22.2	Bedrock	SPBA	Yes
MW-164	Monitoring Well	Active	40.0	53.0	13.0	Bedrock	SPBA	No
MW-165	Monitoring Well	Active	47.5	70.5	23.0	Bedrock	SPBA	No
MW-166	Monitoring Well	Active	39.0	52.0	13.0	Overburden	SPBA	No
MW-167	Monitoring Well	Active	39.0	52.0	13.0	Overburden	SPBA	No
MW-168	Monitoring Well	Active	28.5	42.0	13.5	Overburden	SPBA	No
MW-169	Monitoring Well	Active	32.5	47.0	14.5	Overburden	SPBA	No
MW-170	Monitoring Well	Active	19.2	32.3	13.1	Overburden	SPBA	No
MW-171	Monitoring Well	Active	30.8	43.5	12.7	Overburden and Bedrock	SPBA	No
MW-172	Monitoring Well	Active	23.9	38.5	14.6	Overburden	SPA	No
MW-173	Monitoring Well	Active	18.7	32.8	14.1	Overburden	SPA	No
MW-174	Monitoring Well	Active	18.9	31.8	12.9	Overburden	SPA	No
MW-175	Monitoring Well	Active	16.6	28.9	12.3	Overburden	SPA	No
MW-176	Monitoring Well	Active	28.0	51.0	23.0	Overburden	SPBA	Yes
MW-177R	Monitoring Well	Active	27.5	65.0	37.5	Overburden and Bedrock	SPBA	Yes
MW-178D	Monitoring Well	Active	90.0	100.0	10.0	Bedrock	SPBA	Yes
MW-178S	Monitoring Well	Active	72.0	84.0	12.0	Bedrock	SPBA	Yes
MW-179	Monitoring Well	Active	36.0	66.0	30.0	Overburden	SPBA	Yes
MW-180	Monitoring Well	Active	36.0	62.0	26.0	Overburden	SPBA	Yes
MW-181D	Monitoring Well	Active	93.0	100.0	7.0	Bedrock	SPBA	Yes
MW-181S	Monitoring Well	Active	61.0	71.0	10.0	Bedrock	SPBA	Yes
MW-182	Monitoring Well	Active	27.0	39.0	12.0	Overburden	SPBA	Yes
MW-183	Monitoring Well	Active	27.0	40.0	13.0	Overburden	SPBA	Yes
MW-184D	Monitoring Well	Active	66.0	74.0	8.0	Bedrock	SPBA	Yes
MW-184S	Monitoring Well	Active	51.0	59.0	8.0	Bedrock	SPBA	Yes
MW-185	Monitoring Well	Active	55.9	77.5	21.6	Bedrock	EPBA	Yes
MW-186	Monitoring Well	Active	29.9	63.0	33.1	Bedrock	Northern Site Perimeter	No
Cole B	Monitoring Well	Active	6.0	16.0	10.0	Overburden and Bedrock	SPA	No

TABLE 4.2-1
Physical Well Data Table
Former York Naval Ordnance Plant - York, PA

Well Identification	Type	Status	Depth to Top of Open Interval (feet bgs)	Depth to Base of Open Interval (feet bgs)	Open Interval Length (feet)	Open Interval in Overburden or Bedrock	Site Location	Well Located Inside Technical Impracticability Boundary (yes/no)
Cole D	Monitoring Well	Active	25.0	35.0	10.0	Overburden and Bedrock	SPA	No
Cole E deep	Monitoring Well	Active	--	--	--	--	SPA	No
Cole E shallow	Monitoring Well	Active	--	--	--	--	SPA	No
Cole F	Monitoring Well	Active	18.0	34.0	16.0	Overburden and Bedrock	SPA	No
Cole (Flush)	Monitoring Well	Active	12.0	25.0	13.0	Overburden and Bedrock	SPA	No
GM-1D	Monitoring Well	Active	32.0	44.0	12.0	Overburden and Bedrock	SPA	No
MW-4 (Cole)	Monitoring Well	Active	13.0	32.0	19.0	Overburden and Bedrock	SPA	No
Cole Steel (MW-12)	Monitoring Well	Active	16.0	50.0	34.0	Overburden and Bedrock	SPA	No
RW-4 (Folk)	Residential Well	Active	--	--	--	--	NPBA	No
RW-5 (Giambolvo)	Monitoring Well	Active	--	--	--	--	Giambalvo Property	No
RW-6 (Kinsley Well)	Monitoring Well	Active	--	--	--	--	Northern Site Perimeter	No

Notes:
bgs - below ground surface
NA - Not Applicable
-- = Information not available
CPA - Central Plant Area
EPBA - Eastern Property Boundary Area
NPBA - Northern Property Boundary Area
NW-WPL - Northwest West Parking Lot
NETT - North End Test Track
NPA - North Plant Area
SPA - South Plume Area
SPBA - Southern Property Boundary Area
SW-WPL - Southwest West Parking Lot
TCA - 1,1,1-Trichloroethane

TABLE 4.2-2
Groundwater Attainment Sampling Summary
Former York Naval Ordnance Plant - York, PA

Location at fYNOP	Groundwater Attainment Sample Location Well Identification	Sample Collection Frequency	Sample Collection Period	Number of Samples	Analytes
Northern Property Boundary Area (NPBA)	MW-3	Annual	2013 - 2022	10	VOCs
	MW-9	Annual	2013 - 2022	10	VOCs
	MW-12	Annual	2013 - 2022	10	VOCs
	MW-16S	Annual	2013 - 2022	10	VOCs
	MW-18S	Annual	2013 - 2022	10	VOCs
	MW-18D	Annual	2013 - 2022	10	VOCs
	MW-20S	Annual	2013 - 2022	10	VOCs
	MW-20M	Annual	2013 - 2022	10	VOCs
	MW-142S	Annual	2013 - 2022	10	VOCs
	MW-142D	Annual	2013 - 2022	10	VOCs
	MW-143S	Annual	2013 - 2022	10	VOCs
	MW-143D	Annual	2013 - 2022	10	VOCs
	CW-1A	Annual	2013 - 2022	10	VOCs
	CW-2	Annual	2013 - 2022	10	VOCs
	RW-2 (1)	Annual	2013 - 2020	8	VOCs
	RW-4 (Folk)	Annual	2013 - 2022	9	VOCs
Eastern Site Perimeter (ESP)	MW-2	Annual	2019 - 2022	4	VOCs & Cyanide
	MW-14	Annual	2019 - 2022	4	VOCs
	MW-65S	Annual	2019 - 2022	4	VOCs
South-Central Site Area (SCSA)	MW-67S	Annual	2019 - 2022	4	VOCs
	MW-67D	Annual	2019 - 2022	4	VOCs
	MW-69	Annual	2019 - 2022	4	VOCs
	MW-79	Annual	2019 - 2022	4	VOCs
	MW-88	Quarterly	2021 - 2022	6	VOCs
	MW-111	Annual	2019 - 2022	4	VOCs
	MW-112	Annual	2019 - 2022	4	VOCs
	MW-115	Annual	2019 - 2022	4	VOCs
Southern Property Boundary Area (SPBA)	MW-22	Annual	2019 - 2022	4	VOCs
	MW-108S	Annual	2019 - 2022	4	VOCs
	MW-108D	Annual	2019 - 2022	4	VOCs
	MW-165	Annual	2019 - 2022	4	VOCs
	MW-166	Variable	2018 - 2022	21	VOCs
	MW-167	Variable	2018 - 2022	22	VOCs
	MW-168	Variable	2018 - 2022	21	VOCs
South Plume Area (SPA)	MW-43D	Annual	2019 - 2022	4	VOCs
	Cole D	Annual	2019 - 2022	4	VOCs
	Cole Steel (MW-12)	Annual	2019 - 2022	4	VOCs
	GM-1D	Annual	2019 - 2022	4	VOCs
	MW-110	Annual	2019 - 2022	4	VOCs
	MW-150	Annual	2019 - 2022	4	VOCs
Codorus Creek Levee Area	MW-101S	Quarterly	2021 - 2022	6	VOCs
	MW-101D	Quarterly	2021 - 2022	6	VOCs
West Side of Codorus Creek	MW-148A (72.5-73)	Annual	2019 - 2022	4	VOCs
	MW-148A (136-136.5)	Annual	2019 - 2022	4	VOCs
Northern Site Perimeter (NSP)	MW-5	Quarterly	2021 - 2022	6	VOCs
	MW-6	Quarterly	2021 - 2022	6	VOCs
	MW-82	Annual	2019 - 2022	4	VOCs
	MW-186	Annual	2020 - 2022	3	VOCs

Notes: (1) - RW-2 was abandoned in August 2021.
VOCs - Volatile organic compounds

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-2 9/25/19	MW-2 10/7/20	MW-2 10/1/21	MW-2 10/4/22	MW-14 9/27/19	MW-14 9/29/20	MW-14 9/28/21	MW-14 9/27/22	MW-65S 9/27/19	MW-65S 9/30/20	MW-65S 9/29/21	MW-65S 9/29/22	MW-101D 9/27/21	MW-101D 12/22/21	MW-101D 3/23/22	MW-101D 6/22/22	MW-101D 9/27/22	MW-101D 12/20/22	MW-101S 9/27/21	MW-101S 12/22/21	MW-101S 3/23/22	MW-101S 6/22/22	MW-101S 9/27/22	MW-101S 12/20/22
Volatile Organic Compound																												
1,1,1,2-Tetrachloroethane	70	70		0.57	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	800	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.041	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	31	160		2.8	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	7	7	28	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.82	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	4000	4000		560	25 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	63	260		3.8	25 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	2800	7800		630	25 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	31000	88000		1800	25 U	20 U	20 U	20 U	5 U	20 U	20 U	20 U	5 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.46	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.33 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		8.3	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1 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
Bromodichloromethane	80	80		0.13	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80	80		3.3	5 U	4 U	4 U	4 U	1 U	4 U	4 U	4 U	1 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
Bromomethane	10	10		0.75	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 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 UJ
Carbon Disulfide	1500	6200		81	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1 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
Carbon Tetrachloride	5	5	5	0.46	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	7.8	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.87	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	21000	88000		830	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	80	80		0.22	5 U	1 U	1 U	1 U	1 U	0.29 J	0.45 J	0.92 J	0.9 J	1.4	1.5	1.2	0.43 J	0.48 J	0.35 J	0.39 J	0.42 J	0.47 J	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	30	30		19	5 U	1 U	1 U	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	2 UJ	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	2 U	2 U
cis-1,2-Dichloroethene	70	70	70	3.6	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.24 J	1 U	1 U	13	9.9	8	9.1	8.9	8.8	1 U	0.7 J	0.34 J	0.3 J	0.65 J	0.48 J
cis-1,3-Dichloropropene	6.5	27		0.47	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	20		14	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	120	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1 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
Tetrachloroethene	5	5	5	4.1	61	110	81	68	4.1	3.8	1.8	5.6	1.9	2.2	2.4	2.1	3.9	4.6	4.1	4.1	3.9	5.6	1.1	3	2	1.9	3.8	4.2
Toluene	1000	1000	1000	110	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	100	100	6.8	5 U	5 U	1 U	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	2 U	2 U
trans-1,3-Dichloropropene	6.5	27		0.47	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.28	5 U	1 U	0.62 J	0.7 J	1 U	0.43 J	0.6 J	0.47 J	17	12	12	6.4	5.9	6.5	5.3	6.1	4.5	5.3	1 U	0.74 J	0.42 J	0.38 J	0.76 J	0.64 J
Vinyl Chloride	2	2	2	0.019	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	10000	10000	10000	19	10 U	6 U	1 U	1 U	2 U	6 U	1 U	1 U	2 U	6 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-5 9/27/21	MW-5 12/22/21	MW-5 3/23/22	MW-5 6/22/22	MW-5 9/27/22	MW-5 12/20/22	MW-6 9/27/21	MW-6 12/21/21	MW-6 3/23/22	MW-6 6/22/22	MW-6 9/26/22	MW-6 12/20/22	MW-82 10/8/19	MW-82 10/8/20	MW-82 10/8/21	MW-82 10/7/22	MW-186 10/8/20	MW-186 10/7/21	MW-186 10/13/22	MW-3 9/11/13	MW-3 10/14/14	MW-3 9/21/15	MW-3 10/7/16	MW-3 10/24/17	MW-3 10/1/18	MW-3 9/30/19	MW-3 9/29/20
Volatile Organic Compound																															
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
1,1,1-Trichloroethane	200	200	200	800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 UJ	1 U	1.0 U	1 U
1,1,2-Trichloroethane	5	5	5	0.041	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
1,1-Dichloroethane	31	160		2.8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.22 J	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
1,1-Dichloroethene	7	7	7	28	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
1,2-Dichloropropane	5	5	5	0.82	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
2-Butanone	4000	4000		560	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	5.0 U	5 U	5.0 U	5 U	5 U	5.0 U	10 U
2-Hexanone	63	260		3.8	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	5.0 U	5 UJ	5.0 U	5 U	5 U	5.0 U	10 U
4-Methyl-2-Pentanone	2800	7800		630	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	5.0 U	5 U	5.0 U	5 U	5 U	5.0 U	10 U
Acetone	31000	88000		1800	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	5 U	20 U	20 U	20 U	20 U	20 U	20 U	5 U	5.0 U	5 U	5.0 U	5 U	5 U	5.0 U	20 U
Benzene	5	5	5	0.46	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Bromochloromethane	90	90		8.3	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	5 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Bromoform	80	80		3.3	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	1 U	4 U	4 U	4 U	4 U	4 U	4 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	4 U
Bromomethane	10	10		0.75	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 UJ	1 U	1.0 U	1 U
Carbon Disulfide	1500	6200		81	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	5 U
Carbon Tetrachloride	5	5	5	0.46	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Chlorobenzene	100	100	100	7.8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Chlorodibromomethane	80	80		0.87	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Chloroethane	21000	88000		830	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Chloroform	80	80		0.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.9	2.6	2.2	2.4	2.2	2.2	1.2	1.5
Chloromethane	30	30		19	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
cis-1,2-Dichloroethene	70	70	70	3.6	4.7	4.6	3.4	2.3	3.9	6	1 U	1 U	1 U	1 U	1 U	1 U	2.4	1.6	1.3	1.3	1 U	1 U	1 U	0.66 J	0.75 J	0.63 J	0.73 J	0.82 J	0.82 J	1.0 U	0.66 J
cis-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Ethylbenzene	700	700	700	1.5	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	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Methyl tert-butyl ether	20	20		14	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.26 J	0.23 J	0.19 J	1.0 U	1 U	1 U	1.0 U	1 U
Methylene chloride	5	5		11	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Styrene	100	100	100	120	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	5 U
Tetrachloroethene	5	5	5	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	1.1	1.4	1.5	1.8	1 U	1 U	1 U	0.47 J	0.33 J	0.39 J	0.54 J	1 U	1 U	1.0 U	0.31 J
Toluene	1000	1000	1000	110	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
trans-1,2-Dichloroethene	100	100	100	6.8	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	5 U	1 U	2 U	5 U	1 U	2 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
trans-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Trichloroethene	5	5	5	0.28	0.36 J	0.38 J	1 U	1 U	0.32 J	0.43 J	1 U	1 U	1 U	1 U	1 U	1 U	1.9	1.3	1.3	1.2	1 U	1 U	1 U	32	31	31	28	32	18	4.2	2.8
Vinyl Chloride	2	2	2	0.019	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U	1 U
Xylenes (Total)	10000	10000	10000	19	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	6 U	1 U	1 U	6 U	1 U	1 U	3 U	3.0 U	3 U	2.0 U	2 U	2 U	2.0 U	6 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-3 9/28/21	MW-3 9/29/22	MW-9 9/12/13	MW-9 10/16/14	MW-9 9/22/15	MW-9 10/10/16	MW-9 10/20/17	MW-9 10/3/18	MW-9 10/3/19	MW-9 9/29/20	MW-9 9/30/21	MW-9 9/29/22	MW-12 9/12/13	MW-12 10/17/14	MW-12 9/22/15	MW-12 10/12/16	MW-12 10/25/17	MW-12 10/3/18	MW-12 10/1/19	MW-12 10/2/20	MW-12 10/5/21	MW-12 9/29/22	MW-16S 9/10/13	MW-16S 10/22/14	MW-16S 9/23/15
Volatile Organic Compound																													
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
1,1,1-Trichloroethane	200	200	200	800	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
1,1,2-Trichloroethane	5	5	5	0.041	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
1,1-Dichloroethane	31	160		2.8	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
1,1-Dichloroethene	7	7	7	28	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	5	0.17	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
1,2-Dichloropropane	5	5	5	0.82	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
2-Butanone	4000	4000		560	10 U	10 U	25 U	5.0 UJ	5.0 U	5 U	5.0 U	5 U	5.0 U	10 U	10 U	10 U	25 U	5.0 UJ	5 UJ	15 U	10 U	5 U	25 U	10 U	10 U	10 U	130 U	5.0 U	5.0 U
2-Hexanone	63	260		3.8	10 U	10 U	25 U	5.0 UJ	5 UJ	5 U	5.0 U	5 U	5.0 U	10 U	10 U	10 U	25 U	5.0 UJ	5 UJ	15 U	10 U	5 U	25 U	10 U	10 U	10 U	130 U	5.0 U	5.0 U
4-Methyl-2-Pentanone	2800	7800		630	10 U	10 U	25 U	5.0 UJ	5 UJ	5 U	5.0 U	5 U	5.0 U	10 U	10 U	10 U	25 U	5.0 UJ	5 UJ	15 U	10 U	5 U	25 U	10 U	10 U	10 U	130 U	5.0 U	5.0 U
Acetone	31000	88000		1800	20 U	20 U	25 U	5.0 UJ	5.0 U	5 U	5.0 U	5 U	5.0 U	20 U	20 U	20 U	25 U	5.0 UJ	5.0 U	15 U	10 U	5 U	25 U	0.73 J	20 U	20 U	130 U	5.0 U	5.0 U
Benzene	5	5	5	0.46	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Bromochloromethane	90	90		8.3	5 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	5 U	5 U	5 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 UJ	5 U	5 U	5 U	25 U	1.0 U	1.0 U
Bromodichloromethane	80	80		0.13	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 UJ	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Bromoform	80	80		3.3	4 U	4 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	4 U	4 U	4 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	4 U	4 U	4 U	25 U	1.0 U	1 UJ
Bromomethane	10	10		0.75	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 UJ	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 UJ	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Carbon Disulfide	1500	6200		81	5 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	5 U	5 U	5 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	5 U	5 U	5 U	25 U	1.0 U	1.0 U
Carbon Tetrachloride	5	5	5	0.46	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Chlorobenzene	100	100	100	7.8	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Chlorodibromomethane	80	80		0.87	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Chloroethane	21000	88000		830	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Chloroform	80	80		0.22	1.5	1.1	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	6.2 J	1.0 U	1.0 U
Chloromethane	30	30		19	1 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	2 U	5 U	1.0 UJ	1.0 U	3.0 U	2 UJ	1 U	5.0 U	1 U	1 U	2 UJ	25 U	1.0 U	0.28 J
cis-1,2-Dichloroethene	70	70	70	3.6	0.61 J	0.52 J	32	30 J	36	34	27	33	20	19	15	34	42	47 J	52	58	46	56	47 J	64	65	63	40	38	42
cis-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	5 U	1.0 UJ	1 UJ	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 UJ	1 U	1 U	1 U	25 U	1.0 U	1 UJ
Ethylbenzene	700	700	700	1.5	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Methyl tert-butyl ether	20	20		14	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Methylene chloride	5	5		11	1 U	1 U	1 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 UJ	1 U	1 U	1 U	12 J	1.0 U	1.0 U
Styrene	100	100	100	120	5 U	5 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	5 U	5 U	5 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	5 U	5 U	5 U	25 U	1.0 U	1.0 U
Tetrachloroethene	5	5	5	4.1	0.3 J	1 U	5 U	0.22 J	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	4.7 J	5.4 J	6.4	4.3	2.7	4.1	3.0 J	3.6	3.9	2.9	450	110	6.7
Toluene	1000	1000	1000	110	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100	100	100	6.8	1 U	2 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	2 U	2.3 J	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	5 U	1 U	2 U	25 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	5 U	1.0 UJ	1.0 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Trichloroethene	5	5	5	0.28	3.1	2	44	41 J	29	19	20	27	5.6 J	5.4	4.2	10	130	90 J	120	93	61	67	57	80	75	64	19 J	9.3	5.6
Vinyl Chloride	2	2	2	0.019	1 U	1 U	5 U	1.0 UJ	5	5.6	3.7	1.7	2.9 J	1.6	2.4	0.37 J	5 U	1.0 UJ	1.0 U	3.0 U	2 U	1 U	5.0 U	1 U	1 U	1 U	25 U	1.0 U	1.0 U
Xylenes (Total)	10000	10000	10000	19	1 U	1 U	15 U	3.0 UJ	3.0 U	2 U	2.0 U	2 U	2.0 U	6 U	1 U	1 U	15 U	3.0 UJ	3.0 U	6.0 U	4 U	2 U	10 U	6 U	1 U	1 U	75 U	3.0 U	3.0 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-16S 10/11/16	MW-16S 10/25/17	MW-16S 10/2/18	MW-16S 10/3/19	MW-16S 10/5/20	MW-16S 9/30/21	MW-16S 9/29/22	MW-18D 9/10/13	MW-18D 10/23/14	MW-18D 9/24/15	MW-18D 10/7/16	MW-18D 10/26/17	MW-18D 10/3/18	MW-18D 10/1/19	MW-18D 10/5/20	MW-18D 10/4/21	MW-18D 9/30/22	MW-18S 9/9/13	MW-18S 10/23/14	MW-18S 9/25/15	MW-18S 10/13/16	MW-18S 10/27/17	MW-18S 10/3/18	MW-18S 10/4/19
Volatile Organic Compound																												
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
1,1,1-Trichloroethane	200	200	200	800	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
1,1,2-Trichloroethane	5	5	5	0.041	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
1,1-Dichloroethane	31	160		2.8	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
1,1-Dichloroethene	7	7	7	28	1 U	2 U	1 U	1.0 UJ	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 UJ	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
1,2-Dichloroethane	5	5	5	0.17	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
1,2-Dichloropropane	5	5	5	0.82	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
2-Butanone	4000	4000		560	5 U	10 U	5 U	5.0 U	10 U	10 U	10 U	25 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5.0 U	10 U	10 U	10 U	25 U	5.0 U	5 U	5.0 U	5 U	5 U	5.0 U
2-Hexanone	63	260		3.8	5 U	10 U	5 U	5.0 U	10 U	10 U	10 U	25 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5.0 U	10 U	10 U	10 U	25 U	5.0 U	5 U	5.0 U	5 U	5 U	5.0 U
4-Methyl-2-Pentanone	2800	7800		630	5 U	10 U	5 U	5.0 U	10 U	10 U	10 U	25 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5.0 U	10 U	10 U	10 U	25 U	5.0 U	5 U	5.0 U	5 U	5 U	5.0 U
Acetone	31000	88000		1800	5 U	10 U	5 U	5.0 U	20 U	20 U	20 U	25 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5.0 U	20 U	20 U	20 U	25 U	5.0 U	5 U	5.0 U	5 U	5 U	5.0 U
Benzene	5	5	5	0.46	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Bromochloromethane	90	90		8.3	1 U	2 U	1 U	1.0 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	5 U	5 U	5 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Bromodichloromethane	80	80		0.13	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Bromoform	80	80		3.3	1 U	2 U	1 U	1.0 U	4 U	4 U	4 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	4 U	4 U	4 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Bromomethane	10	10		0.75	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Carbon Disulfide	1500	6200		81	1 U	2 U	1 U	1.0 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	5 U	5 U	5 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Carbon Tetrachloride	5	5	5	0.46	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Chlorobenzene	100	100	100	7.8	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Chlorodibromomethane	80	80		0.87	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Chloroethane	21000	88000		830	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1.0 U
Chloroform	80	80		0.22	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	1.2 J	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Chloromethane	30	30		19	1 U	2 U	1 U	1.0 UJ	1 U	1 U	2 UJ	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	2 U	5 U	1.0 U	0.28 J	1.0 U	1 U	1 U	1.0 U
cis-1,2-Dichloroethene	70	70	70	3.6	37	12	7.4	4.1	5.1	5	5.2	66	14	20	15	14	28	14	21	19	12	71	7	22	3.7	14	26	15
cis-1,3-Dichloropropene	6.5	27		0.47	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Ethylbenzene	700	700	700	1.5	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Methyl tert-butyl ether	20	20		14	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Methylene chloride	5	5		11	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	2.1 J	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	2 J	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Styrene	100	100	100	120	1 U	2 U	1 U	1.0 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	5 U	5 U	5 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Tetrachloroethene	5	5	5	4.1	48	1.7 J	1.1	1.0 U	1.9	1 U	0.74 J	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Toluene	1000	1000	1000	110	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
trans-1,2-Dichloroethene	100	100	100	6.8	1 U	2 U	1 U	1.0 U	5 U	1 U	2 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	5 U	1 U	2 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
trans-1,3-Dichloropropene	6.5	27		0.47	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1.0 U
Trichloroethene	5	5	5	0.28	6.2	7.7 J	20	15	17	18	16	42	8.1	9.5	5.5	3.8	6.6	3	3.6	2.9	1.9	45	5.5	11	1.2	4.1	6.8	3.7 J
Vinyl Chloride	2	2	2	0.019	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	1.6 J	0.58 J	0.60 J	0.53 J	1 UJ	1 U	1.0 U	0.37 J	0.38 J	1 U	1.7 J	0.34 J	0.57 J	1.0 U	1 U	1 U	1.0 U
Xylenes (Total)	10000	10000	10000	19	2 U	4 U	2 U	2.0 U	6 U	1 U	1 U	15 U	3.0 U	3.0 U	2.0 U	2 U	2 U	2.0 U	6 U	1 U	1 U	15 U	3.0 U	3 U	2.0 U	2 U	2 U	2.0 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-18S 10/2/20	MW-18S 10/5/21	MW-18S 9/30/22	MW-20M 9/13/13	MW-20M 10/29/14	MW-20M 9/30/15	MW-20M 10/14/16	MW-20M 10/20/17	MW-20M 10/3/18	MW-20M 10/1/19	MW-20M 9/30/20	MW-20M 9/29/21	MW-20M 9/29/22	MW-20S 9/11/13	MW-20S 10/17/14	MW-20S 9/24/15	MW-20S 10/13/16	MW-20S 10/19/17	MW-20S 10/2/18	MW-20S 9/27/19	MW-20S 9/30/20	MW-20S 9/29/21	MW-20S 9/29/22	MW-142D 9/10/13
Volatile Organic Compound																												
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	800	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.041	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	31	160		2.8	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	7	7	28	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 UJ	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.82	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	4000	4000		560	10 U	10 U	10 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	10 U	10 U	10 U	10 U	25 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U
2-Hexanone	63	260		3.8	10 U	10 U	10 U	5 U	5.0 U	5 UJ	5.0 U	5.0 U	5 U	10 U	10 U	10 U	10 U	25 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U
4-Methyl-2-Pentanone	2800	7800		630	10 U	10 U	10 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	10 U	10 U	10 U	10 U	25 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U
Acetone	31000	88000		1800	20 U	20 U	20 U	5 U	5.0 U	5.0 U	2.7 J	5.0 U	5 U	10 U	20 U	20 U	20 U	25 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5 U	5 U	20 U	20 U	20 U	5 U
Benzene	5	5	5	0.46	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		8.3	5 U	5 U	5 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	5 U	5 U	5 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80	80		3.3	4 U	4 U	4 U	1 U	1.0 U	1 UJ	1.0 U	1.0 U	1 U	2.0 U	4 U	4 U	4 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	4 U	4 U	4 U	1 U
Bromomethane	10	10		0.75	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1.0 UJ	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide	1500	6200		81	5 U	5 U	0.33 J	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	5 U	5 U	5 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U
Carbon Tetrachloride	5	5	5	0.46	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	7.8	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.87	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	21000	88000		830	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	80	80		0.22	1 U	1 U	1 U	1.4	1.0 U	1	0.38 J	0.83 J	1.3	2.0 U	0.78 J	0.67 J	0.39 J	2.8 J	1.7 J	1.8	1.6	1.4	0.86 J	1 U	0.84 J	0.48 J	0.62 J	1 U
Chloromethane	30	30		19	1 U	1 U	2 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 UJ	1 U	1 U	2 UJ	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 UJ	1 U
cis-1,2-Dichloroethene	70	70	70	3.6	14	16	12	1 U	1.0 U	1.0 U	1.0 U	1.0 U	0.81 J	2.0 U	0.39 J	0.31 J	1 U	5 U	1.6 J	1.2	1	0.95 J	2.2	1 U	0.6 J	1	1 U	5.1
cis-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	20		14	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	3.8 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	120	5 U	5 U	5 U	1 U	1.0 U	1 UJ	1.0 U	1.0 U	1 U	2.0 U	5 U	5 U	5 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U
Tetrachloroethene	5	5	5	4.1	1 U	1 U	1 U	1 U	1.0 U	0.30 J	0.52 J	0.48 J	0.74 J	2.0 U	0.49 J	0.39 J	0.73 J	2.7 J	5.8 J	3.8	4.3	2.6	17	2.8	2.2	16	1.4	1 U
Toluene	1000	1000	1000	110	1 U	1 U	1 U	2.2	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	0.29 J
trans-1,2-Dichloroethene	100	100	100	6.8	5 U	1 U	2 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	2 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 U	1 U
trans-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.28	2.7	2.4	1.7	18	0.85 J	13	4.6	32 J	20	21	25	21	18	90	110 J	81	48	32	130	14	17	68	11	1 U
Vinyl Chloride	2	2	2	0.019	0.22 J	0.3 J	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.0 U	1 U	1 U	1 U	5 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	10000	10000	10000	19	6 U	1 U	1 U	3 U	3.0 U	3.0 U	2.0 U	2.0 U	2 U	4.0 U	6 U	1 U	1 U	15 U	3.0 UJ	3.0 U	2.0 U	2.0 U	2 U	2 U	6 U	1 U	1 U	3 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-142D 10/13/14	MW-142D 10/1/15	MW-142D 10/13/16	MW-142D 10/18/17	MW-142D 10/3/18	MW-142D 10/8/19	MW-142D 10/7/20	MW-142D 10/5/21	MW-142D 9/30/22	MW-142S 9/10/13	MW-142S 10/13/14	MW-142S 10/1/15	MW-142S 10/13/16	MW-142S 10/18/17	MW-142S 10/3/18	MW-142S 10/7/19	MW-142S 10/5/20	MW-142S 10/7/21	MW-142S 9/29/22	MW-143D 9/9/13	MW-143D 10/13/14	MW-143D 9/30/15
Volatile Organic Compound																										
1,1,1,2-Tetrachloroethane	70	70		0.57	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ
1,1,1-Trichloroethane	200	200	200	800	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,1,2-Trichloroethane	5	5	5	0.041	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethane	31	160		2.8	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethene	7	7	7	28	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	5	0.17	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,2-Dichloropropane	5	5	5	0.82	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
2-Butanone	4000	4000		560	5.0 U	5 U	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U	5.0 U	5.0 U
2-Hexanone	63	260		3.8	5.0 U	5 U	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U	5.0 U	5 UJ
4-Methyl-2-Pentanone	2800	7800		630	5.0 U	5 U	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U	5.0 U	5 U	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U	5.0 U	5.0 U
Acetone	31000	88000		1800	5.0 U	5 U	5	5.0 U	5 U	5 U	20 U	20 U	20 U	5 U	5.0 U	5 U	4.2 J	5.0 U	5 U	5 U	20 U	20 U	20 U	5 U	5.0 U	5.0 U
Benzene	5	5	5	0.46	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Bromochloromethane	90	90		8.3	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U	1.0 U	1.0 U
Bromodichloromethane	80	80		0.13	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Bromoform	80	80		3.3	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	4 U	4 U	4 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	4 U	4 U	4 U	1 U	1.0 U	1 UJ
Bromomethane	10	10		0.75	1.0 U	1 UJ	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ
Carbon Disulfide	1500	6200		81	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U	1.0 U	1.0 U
Carbon Tetrachloride	5	5	5	0.46	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Chlorobenzene	100	100	100	7.8	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Chlorodibromomethane	80	80		0.87	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Chloroethane	21000	88000		830	1.0 U	1 UJ	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Chloroform	80	80		0.22	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Chloromethane	30	30		19	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 UJ	1 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70	70	70	3.6	6.2	2.6	0.78 J	0.79 J	0.75 J	0.97 J	0.81 J	0.75 J	0.51 J	1.1	1.6	1.9	2.6	2.4	8.7	7.5	5.8	5.2	6.2	0.25 J	0.34 J	0.39 J
cis-1,3-Dichloropropene	6.5	27		0.47	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Ethylbenzene	700	700	700	1.5	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Methyl tert-butyl ether	20	20		14	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Methylene chloride	5	5		11	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Styrene	100	100	100	120	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U	1.0 U	1 UJ
Tetrachloroethene	5	5	5	4.1	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Toluene	1000	1000	1000	110	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100	100	100	6.8	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	5 U	1 U	2 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	5 U	1 U	2 U	1 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	6.5	27		0.47	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Trichloroethene	5	5	5	0.28	1.0 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	0.15 J	1.0 U	0.15 J	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Vinyl Chloride	2	2	2	0.019	1.0 U	1 UJ	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Xylenes (Total)	10000	10000	10000	19	3.0 U	3 U	2.0 U	2.0 U	2 U	2 U	6 U	1 U	1 U	3 U	3.0 U	3 U	2.0 U	2.0 U	2 U	2 U	6 U	1 U	1 U	3 U	3.0 U	3.0 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-143D 10/7/16	MW-143D 10/18/17	MW-143D 10/3/18	MW-143D 9/27/19	MW-143D 10/6/20	MW-143D 10/4/21	MW-143D 10/3/22	MW-143S 9/9/13	MW-143S 10/15/14	MW-143S 9/30/15	MW-143S 10/7/16	MW-143S 10/18/17	MW-143S 10/3/18	MW-143S 10/3/19	MW-143S 10/6/20	MW-143S 10/4/21	MW-143S 10/4/22	CW-1A 9/16/13	CW-1A 10/14/14	CW-1A 10/6/15	CW-1A 10/26/16	CW-1A 10/31/17	CW-1A 10/1/18
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	70	70		0.57	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	800	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.041	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	31	160		2.8	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	7	7	28	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 UJ	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.82	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
2-Butanone	4000	4000		560	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	10 U	10 U	10 U	5 U	5.0 U	5 U	5 U	5 U	5 U
2-Hexanone	63	260		3.8	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U	5.0 U	5 UJ	5.0 U	5.0 U	5 U	5.0 U	10 U	10 U	10 U	5 U	5.0 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	2800	7800		630	5.0 U	5.0 U	5 U	5 U	10 U	10 U	10 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5.0 U	10 U	10 U	10 U	5 U	5.0 U	5 U	5 U	5 U	5 U
Acetone	31000	88000		1800	5.0 U	5.0 U	5 U	5 U	20 U	20 U	20 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	3.6 J	20 U	20 U	20 U	5 U	5.0 U	5 U	5 U	5 U	5 U
Benzene	5	5	5	0.46	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		8.3	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	5 U	5 U	5 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U
Bromodichloromethane	80	80		0.13	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Bromoform	80	80		3.3	1.0 U	1.0 U	1 U	1 U	4 U	4 U	4 U	1 U	1.0 U	1 UJ	1.0 U	1.0 U	1 U	1.0 U	4 U	4 U	4 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Bromomethane	10	10		0.75	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U
Carbon Disulfide	1500	6200		81	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	5 U	5 U	5 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	5	5	5	0.46	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	7.8	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.87	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Chloroethane	21000	88000		830	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U
Chloroform	80	80		0.22	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	0.38 J	0.44 J	0.31 J	0.44 J	1 U	1 U
Chloromethane	30	30		19	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 UJ	1 U	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	70	70	70	3.6	0.66 J	0.74 J	1.5	1.1	1.8	2.2	2.7	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	0.31 J	0.51 J	1 U	0.73 J	1 U	1 U
cis-1,3-Dichloropropene	6.5	27		0.47	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	20		14	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	120	1.0 U	1.0 U	1 U	1 U	5 U	5 U	5 U	1 U	1.0 U	1 UJ	1.0 U	1.0 U	1 U	1.0 U	5 U	5 U	5 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	5	4.1	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1.1	0.84 J	1.0 U	0.76 J	0.57 J	0.55 J	0.51 J	1.1	0.83 J	0.59 J	1.7	2.8	1.9	2.3	1.8	1.8
Toluene	1000	1000	1000	110	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	100	100	6.8	1.0 U	1.0 U	1 U	1 U	5 U	1 U	2 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	5 U	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	6.5	27		0.47	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.28	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	3	1.9	2.2	1.3	1.1	1.1	1.0 U	0.47 J	0.46 J	1 U	26	31	28	56	53	41
Vinyl Chloride	2	2	2	0.019	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U
Xylenes (Total)	10000	10000	10000	19	2.0 U	2.0 U	2 U	2 U	6 U	1 U	1 U	3 U	3.0 U	3.0 U	2.0 U	2.0 U	2 U	2.0 U	6 U	1 U	1 U	3 U	3.0 U	3 U	2 U	2 U	2 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	CW-1A 9/27/19	CW-1A 10/2/20	CW-1A 9/30/21	CW-1A 9/28/22	CW-2 9/16/13	CW-2 10/14/14	CW-2 10/7/15	CW-2 10/26/16	CW-2 10/24/17	CW-2 10/3/18	CW-2 10/1/19	CW-2 10/2/20	CW-2 9/29/21	CW-2 9/28/22	RW-2 9/10/13	RW-2 10/20/14	RW-2 9/16/15	RW-2 10/3/16	RW-2 10/17/17	RW-2 10/2/18	RW-2 10/2/19	RW-2 9/28/20	RW-4 Folk 9/11/13	RW-4 Folk 10/24/14	RW-4 Folk 9/16/15	RW-4 Folk 10/1/16
Volatile Organic Compound																														
1,1,1,2-Tetrachloroethane	70	70		0.57	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	200	200	200	800	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	5	5	5	0.041	2 UJ	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	31	160		2.8	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	7	7	7	28	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 UJ	1 U	1 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	5	0.17	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	5	5	5	0.82	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	4000		560	10 U	10 U	10 U	10 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	10 U	10 U	10 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5.0 U	10 U	5 U	5.0 U	5 UJ	5.0 U
2-Hexanone	63	260		3.8	10 U	10 U	10 U	10 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	10 U	10 U	10 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5.0 U	10 U	5 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone	2800	7800		630	10 UJ	10 U	10 U	10 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	10 U	10 U	10 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5.0 U	10 U	5 U	5.0 U	5.0 U	5.0 U
Acetone	31000	88000		1800	10 U	20 U	20 U	20 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5.0 U	0.81 J	20 U	20 U	5 U	5.0 U	5.0 U	4.5 J	5 U	5 U	5.0 U	20 U	5 U	5.0 U	5 UJ	3.2 J
Benzene	5	5	5	0.46	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	90	90		8.3	2 U	5 U	5 U	5 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1.0 U	5 U	5 U	5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	5 U	1 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	80	80		0.13	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Bromoform	80	80		3.3	2 U	4 U	4 U	4 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	4 U	4 U	4 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	4 U	1 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	10		0.75	2 UJ	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	1500	6200		81	2 U	5 U	5 U	5 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	5 U	5 U	5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	5 U	1 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	5	5	5	0.46	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	100	100	7.8	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Chlorodibromomethane	80	80		0.87	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Chloroethane	21000	88000		830	2 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Chloroform	80	80		0.22	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	0.17 J	0.23 J	1.0 U	1 U	1 U	1.0 U	1 U	0.53 J	1.0 U	0.50 J	0.46 J
Chloromethane	30	30		19	2 U	1 U	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	2 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 UJ	1 U	1 U	1.0 U	1 UJ	1.0 U
cis-1,2-Dichloroethene	70	70	70	3.6	2 U	0.31 J	1 U	1 U	0.87 J	2.6	0.78 J	6.1	1 U	5.7	1.1	0.86 J	1 U	2.4	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	6.5	27		0.47	2 UJ	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	700	700	1.5	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	20	20		14	2 UJ	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Methylene chloride	5	5		11	2 UJ	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	100	120	2 U	5 U	5 U	5 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	5 U	5 U	5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	5 U	1 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5	5	5	4.1	1.5 J	1.2	0.65 J	1.8	3	1.4	3.2	0.97 J	0.91 J	1.3	1.1	1	2.4	0.98 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Toluene	1000	1000	1000	110	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	0.26 J	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100	100	100	6.8	2 U	5 U	1 U	2 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	5 U	1 U	2 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	6.5	27		0.47	2 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5	5	5	0.28	36 J	32	9.3	20	6.3	14	4.9	15	10	12	6.8	6	0.62 J	7.1	1.9	3.1	3.8	3.7	3.4	2.2	3.9	4	1 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	2	2	2	0.019	2 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U *	1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	10000	10000	19	4 U	6 U	1 U	1 U	3 U	3.0 U	3 U	2 U	2 U	2 U	2.0 U	6 U	1 U	1 U	3 U	3.0 U	3.0 U	2.0 U	2 U	2 U	2.0 U	6 U	3 U	3.0 U	3.0 U	2.0 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	RW-4 Folk 10/24/17	RW-4 Folk 10/2/18	RW-4 Folk 9/30/19	RW-4 Folk 10/7/20	RW-4 Folk 10/13/22	MW-67D 10/8/19	MW-67D 10/5/20	MW-67D 10/1/21	MW-67D 10/3/22	MW-67S 10/8/19	MW-67S 10/5/20	MW-67S 10/1/21	MW-67S 9/30/22	MW-69 10/11/19	MW-69 10/7/20	MW-69 10/8/21	MW-69 10/13/22	MW-79 10/10/19	MW-79 10/8/20	MW-79 10/7/21	MW-79 10/4/22	MW-88 9/27/21
Volatile Organic Compound																										
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	800	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	4.9	4.7	2.6	3.6	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.041	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	31	160		2.8	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	2.9	1.8	1.8	1.3	1 U
1,1-Dichloroethene	7	7	7	28	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1.2	1.2	0.43 J	0.94 J	1.0 U	0.26 J	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.82	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
2-Butanone	4000	4000		560	5 U	5 U	5.0 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	10 U
2-Hexanone	63	260		3.8	5 U	5 U	5.0 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	2800	7800		630	5 U	5 U	5.0 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5.0 UJ	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	10 U
Acetone	31000	88000		1800	5 U	5 U	5.0 U	20 U	20 U	5 U	20 U	20 U	20 U	5 U	20 U	20 U	20 U	5.0 U	1.2 J	20 U	20 U	5.0 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.46	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		8.3	1 U	1 U	1.0 U	5 U	5 U	1 U	5 U	5 U	5 U	1 UJ	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	5 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Bromoform	80	80		3.3	1 U	1 U	1.0 U	4 U	4 U	1 U	4 U	4 U	4 U	1 U	4 U	4 U	4 U	1.0 U	4 U	4 U	4 U	1.0 U	4 U	4 U	4 U	4 U
Bromomethane	10	10		0.75	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Carbon Disulfide	1500	6200		81	1 U	1 U	1.0 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5	5	0.46	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	7.8	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.87	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Chloroethane	21000	88000		830	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Chloroform	80	80		0.22	1 U	1 U	1.0 U	1 U	1 U	1.3	1.2	1.2	1.1	1.2	1.1	1.1	0.88 J	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Chloromethane	30	30		19	1 U	1 U	1.0 U	1 U	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	2 U	1.0 U	1 U	1 U	2 U	1.0 U	1 U	1 U	2 U	1 U
cis-1,2-Dichloroethene	70	70	70	3.6	1 U	1 U	1.0 U	1 U	1 U	1 U	0.33 J	0.33 J	0.34 J	1 UJ	0.4 J	0.4 J	0.33 J	8	6.2	3.5	4.7	6.2	2.3	1.7	1	0.37 J
cis-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	20		14	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	120	1 U	1 U	1.0 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5	5	4.1	1 U	1 U	1.0 U	1 U	1 U	1 U	0.33 J	0.3 J	0.3 J	1.5	2	1.4	1.5	1.0 U	0.38 J	0.3 J	1 U	1.0 U	1 U	1 U	1 U	4.5
Toluene	1000	1000	1000	110	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	100	100	6.8	1 U	1 U	1.0 U	5 U	2 U	1 U	5 U	1 U	2 U	1 U	5 U	1 U	2 U	1.0 U	5 U	1 U	2 U	1.0 U	5 U	1 U	2 U	1 U
trans-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.28	1 U	1 U	1.0 U	1 U	1 U	1	1.1	1.2	0.92 J	2.2	2.1	1.4	1.4	9.4	9.4	5.5	4.8	1.0 U	0.42 J	1 U	0.35 J	2.2
Vinyl Chloride	2	2	2	0.019	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U
Xylenes (Total)	10000	10000	10000	19	2 U	2 U	2.0 U	6 U	1 U	2 U	6 U	1 U	1 U	2 U	6 U	1 U	1 U	2.0 U	6 U	1 U	1 U	2.0 U	6 U	1 U	1 U	1 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-88 12/22/21	MW-88 3/23/22	MW-88 6/22/22	MW-88 9/27/22	MW-88 12/20/22	MW-111 10/9/19	MW-111 10/12/20	MW-111 10/11/21	MW-111 10/6/22	MW-112 10/8/19	MW-112 10/9/20	MW-112 10/8/21	MW-112 10/7/22	MW-115 10/10/19	MW-115 10/12/20	MW-115 10/8/21	MW-115 10/6/22	MW-43D 10/11/19	MW-43D 10/8/20	MW-43D 10/6/21	MW-43D 10/6/22	MW-110 9/24/19	MW-110 9/30/20
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	800	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.041	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	31	160		2.8	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20	13	13	13	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	7	7	28	1 U	1 U	1 U	1 U	1 U	1.0 U	0.36 J	0.56 J	0.64 J	1 U	1 U	1 U	1 U	3.1	2	2.6	1.9	1.0 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.5	1.3	1.2	1.1	1.0 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.82	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	4000	4000		560	10 U	10 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5 U	10 U
2-Hexanone	63	260		3.8	10 U	10 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5 U	10 U
4-Methyl-2-Pentanone	2800	7800		630	10 U	10 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5.0 UJ	10 U	10 U	10 U	5.0 UJ	10 U	10 U	10 U	5 U	10 U
Acetone	31000	88000		1800	20 U	20 U	20 U	20 U	20 U	5.0 U	20 U	20 U	20 U	5 U	20 U	20 U	20 U	4.2 J	20 U	20 U	20 U	5.0 U	20 U	20 U	20 U	5 U	20 U
Benzene	5	5	5	0.46	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	9.3	8.4	8.8	7.3	1.0 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		8.3	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1 U	5 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80	80		3.3	4 U	4 U	4 U	4 U	4 U	1.0 U	4 U	4 U	4 U	1 U	4 U	4 U	4 U	1.0 U	4 U	4 U	4 U	1.0 U	4 U	4 U	4 U	1 U	4 U
Bromomethane	10	10		0.75	1 U	1 U	1 U	1 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide	1500	6200		81	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1 U	5 U
Carbon Tetrachloride	5	5	5	0.46	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	7.8	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.87	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	21000	88000		830	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	0.69 J	0.83 J	0.64 J	1.0 U	1 U	1 U	1 U	1 U	1 U
Chloroform	80	80		0.22	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	0.48 J	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	0.58 J
Chloromethane	30	30		19	1 U	1 U	1 U	2 U	2 U	1.0 U	1 U	1 U	2 U	1 U	1 U	1 U	2 U	1.0 U	1 U	1 UJ	2 U	1.0 U	1 U	1 U	2 U	1 U	1 U
cis-1,2-Dichloroethene	70	70	70	3.6	0.87 J	0.78 J	1.8	1 U	0.78 J	2.7	1 U	8.6	7.7	1 U	1 U	1 U	1 U	150	120	120	98	7.2	6.3	5.4	4.6	1 U	1 U
cis-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	20		14	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	28	22	22	22	1.0 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	120	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1 U	5 U
Tetrachloroethene	5	5	5	4.1	5.2	4.6	11	0.89 J	4.9	1.0 U	1 U	1 U	1 U	1 U	1 U	0.32 J	1 U	1.0 U	1 U	1 U	1 U	6.3	5.5	5.6	5.4	23 J	21
Toluene	1000	1000	1000	110	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	100	100	6.8	1 U	1 U	1 U	2 U	2 U	1.0 U	5 U	1 U	2 U	1 U	5 U	1 U	2 U	1.0 U	1.1 J	1 U	0.88 J	1.0 U	5 U	1 U	2 U	1 U	1 U
trans-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.28	1.7	1.3	2.4	0.44 J	0.85 J	1.0 U	1 U	1.2	1.2	0.71 J	0.7 J	0.88 J	0.68 J	1.0 U	0.43 J	0.94 J	1 U	5.1	3.1	4.7	3.1	0.71 J	0.55 J
Vinyl Chloride	2	2	2	0.019	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	67	88	95	79	1.0 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	10000	10000	10000	19	1 U	1 U	1 U	1 U	1 U	2.0 U	6 U	1 U	1 U	2 U	6 U	1 U	1 U	2.0 U	6 U	1 U	1 U	2.0 U	6 U	1 U	1 U	2 U	6 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-110 10/5/21	MW-110 10/5/22	MW-150 10/4/19	MW-150 9/30/20	MW-150 10/5/21	MW-150 10/5/22	Cole D 10/4/19	Cole D 10/1/20	Cole D 10/5/21	Cole D 10/5/22	Cole Steel (MW-12) 10/4/19	Cole Steel (MW-12) 10/1/20	Cole Steel (MW-12) 10/8/21	Cole Steel (MW-12) 10/7/22	GM-1D 10/4/19	GM-1D 9/30/20	GM-1D 10/5/21	GM-1D 10/7/22	MW-22 9/25/19	MW-22 10/5/20	MW-22 9/28/21	MW-22 9/30/22	MW-108D 9/24/19	MW-108D 10/7/20	MW-108D 9/29/21
Volatile Organic Compound																													
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	800	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.041	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	31	160		2.8	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	7	7	28	1 U	1 U	0.90 J	0.53 J	0.47 J	0.52 J	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.82	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	4000	4000		560	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
2-Hexanone	63	260		3.8	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
4-Methyl-2-Pentanone	2800	7800		630	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5.0 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Acetone	31000	88000		1800	20 U	20 U	5.0 U	20 U	20 U	20 U	5.0 U	0.88 J	20 U	20 U	5.0 U	20 U	20 U	20 U	5.0 U	20 U	20 U	20 U	5 U	20 U	20 U	20 U	5 U	20 U	20 U
Benzene	5	5	5	0.46	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		8.3	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1 U	5.0 U	5 U	5 U	1 U	5 U	5 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80	80		3.3	4 U	4 U	1.0 U	4 U	4 U	4 U	1.0 U	4 U	4 U	4 U	1.0 U	4 U	4 U	4 U	1.0 U	4 U	4 U	4 U	1 U	4.0 U	4 U	4 U	1 U	4 U	4 U
Bromomethane	10	10		0.75	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide	1500	6200		81	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1 U	5.0 U	5 U	5 U	1 U	5 U	5 U
Carbon Tetrachloride	5	5	5	0.46	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	7.8	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.87	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	21000	88000		830	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Chloroform	80	80		0.22	0.52 J	0.73 J	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	0.39 J	0.39 J
Chloromethane	30	30		19	1 U	2 U	1.0 U	1 U	1 U	2 U	1.0 U	1 U	1 U	2 U	1.0 U	1 U	1 U	2 U	1.0 U	1 U	1 U	2 U	1 U	1.0 U	1 U	2 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	70	70	70	3.6	1 U	1 U	44	37	40	40	1.0 U	1 U	1 U	1 U	8.8	16	17	18	1.0 U	1 U	1 U	1 U	1 U	0.20 J	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	20		14	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	120	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1.0 U	5 U	5 U	5 U	1 U	5.0 U	5 U	5 U	1 U	5 U	5 U
Tetrachloroethene	5	5	5	4.1	21	18	1.0 U	1 U	1 U	1 U	26	15	20	17	1.0 U	0.8 J	0.9 J	0.87 J	2.8	1.3	8.8	0.41 J	5.2	8.6	2.4	5.5	0.48 J	0.33 J	0.32 J
Toluene	1000	1000	1000	110	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	100	100	6.8	1 U	2 U	1.0 U	1 U	1 U	2 U	1.0 U	5 U	1 U	2 U	1.0 U	5 U	1 U	2 U	1.0 U	1 U	1 U	2 U	1 U	5.0 U	1 U	2 U	1 U	5 U	1 U
trans-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.28	0.48 J	0.43 J	46	31	32	30	1.0 U	0.54 J	0.9 J	0.5 J	13 J	16	16	15	1.0 U	1 U	0.39 J	1 U	4.4	3.2	1.8	2.3	1 U	0.29 J	1 U
Vinyl Chloride	2	2	2	0.019	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	10000	10000	10000	19	1 U	1 U	2.0 U	6 U	1 U	1 U	2.0 U	6 U	1 U	1 U	2.0 U	6 U	1 U	1 U	2.0 U	6 U	1 U	1 U	2 U	6.0 U	1 U	1 U	2 U	6 U	1 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-108D 9/26/22	MW-108S 9/25/19	MW-108S 10/9/20	MW-108S 9/30/21	MW-108S 9/28/22	MW-165 9/26/19	MW-165 10/9/20	MW-165 9/30/21	MW-165 9/28/22	MW-166 12/20/18	MW-166 3/29/19	MW-166 6/28/19	MW-166 9/25/19	MW-166 12/18/19	MW-166 3/25/20	MW-166 6/24/20	MW-166 10/15/20	MW-166 12/23/20	MW-166 3/24/21	MW-166 6/24/21	MW-166 9/23/21	MW-166 12/22/21	MW-166 1/11/22	MW-166 1/27/22
Volatile Organic Compound																												
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 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	0.84	4.3		0.076	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.041	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	31	160		2.8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	7	7	28	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.82	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	4000	4000		560	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	5 U	5.0 U	5 U	5.0 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	63	260		3.8	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	5 UJ	5.0 U	5 U	5.0 U	5 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	2800	7800		630	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	5 UJ	5.0 U	5 U	5.0 U	5 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	31000	88000		1800	20 U	5 U	20 U	20 U	20 U	5 U	20 U	20 U	20 U	1.0 U	5 U	5.0 U	5 U	5.0 UJ	5 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.46	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		8.3	5 U	1 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80	80		3.3	4 U	1 U	4 U	4 U	4 U	1 U	4 U	4 U	4 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
Bromomethane	10	10		0.75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide	1500	6200		81	5 U	1 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5	5	0.46	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	7.8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.87	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	21000	88000		830	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	80	80		0.22	0.39 J	1 U	1 U	1 U	0.39 J	1 U	1 U	1 U	1 U	1.3	0.84 J	1.0 U	0.66 J	1.0 U	1 U	0.98 J	0.69 J	0.52 J	0.47 J	0.76 J	0.5 J	0.6 J	0.48 J	0.35 J
Chloromethane	30	30		19	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1.0 U	1 U	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	70	70	70	3.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.8 J	1 U	1 U
cis-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	20		14	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	120	5 U	1 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5	5	4.1	1 U	1 U	1 U	1 U	1 U	3.6	3.1	3	2.8	1.1	0.7 J	0.75 J	0.83 J	0.63 J	0.48 J	0.66 J	0.98 J	0.59 J	0.62 J	0.55 J	0.48 J	70	39	14
Toluene	1000	1000	1000	110	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	100	100	6.8	2 U	1 U	5 U	1 U	2 U	1 U	5 U	1 U	2 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.28	1 U	1 U	1 U	1 U	1 U	3.3	2.2	2	1.2	1.5	0.92 J	0.88 J	1.3	0.71 J	1 U	0.96 J	0.87 J	0.6 J	0.53 J	0.66 J	0.43 J	4.9	3	1.2
Vinyl Chloride	2	2	2	0.019	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	10000	10000	10000	19	1 U	2 U	6 U	1 U	1 U	2 U	6 U	1 U	1 U	2 U	2 U	2.0 U	2 U	2.0 U	2 U	6 U	6 U	6 U	6 U	1 U	1 U	1 U	1 U	1 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-166 2/8/22	MW-166 2/22/22	MW-166 3/8/22	MW-166 3/23/22	MW-166 4/26/22	MW-166 5/25/22	MW-166 9/27/22	MW-167 12/20/18	MW-167 3/29/19	MW-167 5/1/19	MW-167 6/28/19	MW-167 9/25/19	MW-167 12/18/19	MW-167 3/25/20	MW-167 6/24/20	MW-167 10/15/20	MW-167 12/23/20	MW-167 3/24/21	MW-167 6/24/21	MW-167 9/23/21	MW-167 12/22/21	MW-167 1/27/22	MW-167 2/8/22	MW-167 2/22/22	MW-167 3/8/22
Volatile Organic Compound																													
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 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	0.84	4.3		0.076	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 UJ	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	5	5	5	0.041	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 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	31	160		2.8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 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-Dichloroethene	7	7	7	28	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 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-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 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	5	5	5	0.17	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 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	5	5	5	0.82	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	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-Butanone	4000	4000		560	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U	5.0 U	5 U	5.0 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	63	260		3.8	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	5 UJ	5 U	5.0 U	5 U	5.0 U	5 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	2800	7800		630	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	5 UJ	5 U	5.0 U	5 U	5.0 U	5 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	31000	88000		1800	1.1 J	20 U	2.6 J	3 J	20 U	20 U	20 U	5 U	5 U	5 U	5.0 U	5 U	5.0 UJ	5 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.46	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		8.3	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80	80		3.3	4 U	4 U	4 U	4 U	4 U	4 U	4 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
Bromomethane	10	10		0.75	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide	1500	6200		81	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5	5	0.46	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	7.8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.87	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	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	21000	88000		830	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	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	80	80		0.22	0.47 J	0.58 J	0.48 J	0.55 J	0.45 J	0.55 J	0.65 J	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	0.2 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	30	30		19	1 U	1 U	1 U	1 U	1 UJ	1 U	2 U	1 U	1 U	1 U	1.0 U	1 U	1.0 UJ	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	70	70	70	3.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	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	6.5	27		0.47	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	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 tert-butyl ether	20	20		14	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	120	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5	5	4.1	13	9.3	8.5	7.2	4.8	3.2	2.2	2.6	9.8	3.6	4.4	14	7.6	2.9	2.4	5.8	4	2.7	3.6	3.2	3.7	2	1.6	1.5	1.4
Toluene	1000	1000	1000	110	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	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-1,2-Dichloroethene	100	100	100	6.8	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	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	6.5	27		0.47	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.28	1.3	0.98 J	0.93 J	0.85 J	0.75 J	0.51 J	0.54 J	6.9	5	1.8	1.6	5.9	3	0.87 J	0.7 J	1.8	1.3	1 U	1.2	0.58 J	0.95 J	0.45 J	0.33 J	1 U	0.33 J
Vinyl Chloride	2	2	2	0.019	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	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)	10000	10000	10000	19	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	2 U	2.0 U	2 U	2.0 U	2 U	6 U	6 U	6 U	6 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-167 3/23/22	MW-167 4/26/22	MW-167 5/25/22	MW-167 9/27/22	MW-168 12/20/18	MW-168 4/2/19	MW-168 6/28/19	MW-168 9/25/19	MW-168 12/18/19	MW-168 3/25/20	MW-168 6/24/20	MW-168 10/15/20	MW-168 12/23/20	MW-168 3/24/21	MW-168 6/24/21	MW-168 9/23/21	MW-168 12/22/21	MW-168 1/27/22	MW-168 2/8/22	MW-168 2/22/22	MW-168 3/8/22	MW-168 3/23/22	MW-168 4/26/22	MW-168 5/25/22	MW-168 9/27/22
Volatile Organic Compound																													
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	800	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 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	0.84	4.3		0.076	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 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	5	5	5	0.041	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 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	31	160		2.8	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 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-Dichloroethene	7	7	7	28	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 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-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 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	5	5	5	0.17	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 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	5	5	5	0.82	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	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-Butanone	4000	4000		560	10 U	10 U	10 U	10 U	5 U	5 U	5.0 U	5 U	5.0 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	63	260		3.8	10 U	10 U	10 U	10 U	5 U	5 UJ	5.0 U	5 U	5.0 U	5 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	2800	7800		630	10 U	10 U	10 U	10 U	5 U	5 UJ	5.0 U	5 U	5.0 U	5 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	31000	88000		1800	20 U	20 U	20 U	20 U	5 U	5 U	5.0 U	5 U	5.0 UJ	5 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.46	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		8.3	5 U	5 U	5 U	5 U	1 U *	1 U	1.0 U	1 U	1.0 U	1 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
Bromodichloromethane	80	80		0.13	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80	80		3.3	4 U	4 U	4 U	4 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
Bromomethane	10	10		0.75	1 U	1 UJ	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
Carbon Disulfide	1500	6200		81	5 U	5 U	5 U	5 U	1 J	1 U	1.0 U	1 U	1.0 U	1 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
Carbon Tetrachloride	5	5	5	0.46	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	7.8	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.87	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	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	21000	88000		830	1 U	1 UJ	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
Chloroform	80	80		0.22	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	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	30	30		19	1 U	1 UJ	1 U	2 U	1 U	1 U	1.0 U	1 U	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	2 U
cis-1,2-Dichloroethene	70	70	70	3.6	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	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	6.5	27		0.47	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	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 tert-butyl ether	20	20		14	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	1 U	1 U	1 U	1 U	1.2	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	120	5 U	5 U	5 U	5 U	1 U	1 U	1.0 U	1 U	1.0 U	1 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
Tetrachloroethene	5	5	5	4.1	1.2	1	1	1.7	1.1	0.67 J	0.59 J	1 U	1.0 U	1 U	0.26 J	0.27 J	1 U	0.25 J	1 U	0.35 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1000	1000	1000	110	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	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-1,2-Dichloroethene	100	100	100	6.8	1 U	1 U	1 U	2 U	1 U	1 U	1.0 U	1 U	1.0 U	1 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	2 U
trans-1,3-Dichloropropene	6.5	27		0.47	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.28	1 U	1 U	1 U	0.5 J	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	2	2	2	0.019	1 U	1 UJ	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
Xylenes (Total)	10000	10000	10000	19	1 U	1 U	1 U	1 U	2 U	2 U	2.0 U	2 U	2.0 U	2 U	6 U	6 U	6 U	6 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-3
Groundwater Attainment Sample Analytical Data - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification Depth (feet) Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-148A 72.5 - 73 10/25/19	MW-148A 136 - 136.5 10/25/19	MW-148A 72.5 - 73 10/15/20	MW-148A 136 - 136.5 10/15/20	MW-148A 72.5 - 73 10/12/21	MW-148A 136 - 136.5 10/12/21	MW-148A 72.5 - 73 10/11/22	MW-148A 136 - 136.5 10/11/22
Volatile Organic Compound												
1,1,1,2-Tetrachloroethane	70	70		0.57	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	800	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.041	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	31	160		2.8	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	7	7	28	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.82	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	4000	4000		560	5.0 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	63	260		3.8	5.0 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	2800	7800		630	5.0 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	31000	88000		1800	5.0 U	5.0 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.46	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		8.3	1.0 U	1.0 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	80	80		0.13	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80	80		3.3	1.0 U	1.0 U	4 U	4 U	4 U	4 U	4 U	4 U
Bromomethane	10	10		0.75	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide	1500	6200		81	1.0 U	1.0 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5	5	0.46	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	7.8	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.87	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	21000	88000		830	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	80	80		0.22	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	30	30		19	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 U	2 U
cis-1,2-Dichloroethene	70	70	70	3.6	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	6.5	27		0.47	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	20		14	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	120	1.0 U	1.0 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5	5	4.1	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1000	1000	1000	110	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	100	100	6.8	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 U	2 U
trans-1,3-Dichloropropene	6.5	27		0.47	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.28	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	2	2	2	0.019	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	10000	10000	10000	19	2.0 U	2.0 U	6 U	6 U	1 U	1 U	1 U	1 U

Notes:
µg/L - Micrograms per liter

U - Not Detected. Results are shown as the laboratory Reporting Limit (RL) followed by "U".

J - Estimated. Detected concentration between the laboratory RL and the Method Detection Limit (MDL) shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable.

PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential

USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level

USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = 1x10-6 and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-4
Groundwater Attainment Sample Analytical Data - Total and Available Cyanide (MW-2)
Former York Naval Ordnance Plant - York, PA

Location/Identification Sample Date Parameter	PADEP MSC UA R (µg/L)	PADEP MSC UA NR (µg/L)	USEPA MCL (µg/L)	USEPA RSL (µg/L)	MW-2 9/25/19	MW-2 10/7/20	MW-2 10/1/21	MW-2 10/4/22
Cyanide								
Cyanide, Free (Available)	200	200	200	1.5	33	80	19	9.7
Cyanide, Total					270	310	280	35

Notes:
µg/L - Micrograms per liter
PADEP MSC - Pennsylvania Department of Environmental Protection Statewide health standard Medium-Specific Concentration
UA R - Used Aquifer Residential
UA NR - Used Aquifer Non-Residential
USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level
USEPA RSL - United States Environmental Protection Agency Regional Screening Level for Residential Tap Water (TR = $1x10^{-6}$ and THQ=1.0)
Color shaded cell denotes reported concentration greater than regulatory level

TABLE 4.2-5
Groundwater Attainment Sample Data Summary (Group 1 Substances)
Former York Naval Ordnance Plant - York, PA

Location at fYNOP	Groundwater Attainment Sample Location Well Identification	Sample Collection Frequency	Sample Collection Period	Number (#) of Samples	Constituent of Concern and Regulatory Level							
					TCE (5 µg/L)		PCE (5 µg/L)		cis12DCE (70 µg/L)		Vinyl Chloride (2 µg/L)	
					# of Detects	Max. Conc.	# of Detects	Max. Conc.	# of Detects	Max. Conc.	# of Detects	Max. Conc.
Northern Property Boundary Area (NPBA)	MW-3	Annual	2013 - 2022	10	10	32	6	0.54	9	0.82	0	0.88
	MW-9	Annual	2013 - 2022	10	10	44	1	0.22	10	36	8	5.6
	MW-12	Annual	2013 - 2022	10	10	130	10	6.4	10	65	0	4.4
	MW-16S	Annual	2013 - 2022	10	10	20	8	450	10	42	0	5.7
	MW-18S	Annual	2013 - 2022	10	10	45	0	0.74	10	71	5	1.7
	MW-18D	Annual	2013 - 2022	10	10	42	0	0.74	10	66	6	1.6
	MW-20S	Annual	2013 - 2022	10	10	130	10	17	7	2.2	0	1.1
	MW-20M	Annual	2013 - 2022	10	10	32	7	0.74	3	0.81	0	1.8
	MW-142S	Annual	2013 - 2022	10	2	0.15	0	0.47	10	8.7	0	0.88
	MW-142D	Annual	2013 - 2022	10	0	0.69	0	0.47	10	6.2	0	0.88
	MW-143S	Annual	2013 - 2022	10	8	3	9	1.1	0	0.71	0	0.88
	MW-143D	Annual	2013 - 2022	10	0	0.69	0	0.47	10	2.7	0	0.88
	CW-1A	Annual	2013 - 2022	10	10	56	10	2.8	4	0.73	0	1.8
	CW-2	Annual	2013 - 2022	10	10	15	10	3.2	8	6.1	0	0.88
	RW-2 (1)	Annual	2013 - 2020	8	8	4	0	0.47	0	0.71	0	0.88
	RW-4 (Folk)	Annual	2013 - 2022	9	0	0.69	0	0.47	0	0.71	0	0.88
Eastern Site Perimeter (ESP)	MW-2	Annual	2019 - 2022	4	2	0.7	4	110	4	3.5	0	4.4
	MW-14	Annual	2019 - 2022	4	3	0.47	4	5.6	0	0.71	0	0.88
	MW-65S	Annual	2019 - 2022	4	4	17	4	2.4	1	0.24	0	0.88
South-Central Site Area (SCSA)	MW-67S	Annual	2019 - 2022	4	4	2.2	4	2	3	0.4	0	0.88
	MW-67D	Annual	2019 - 2022	4	4	1.2	2	0.3	3	0.34	0	0.88
	MW-69	Annual	2019 - 2022	4	4	9.4	2	0.38	4	8	0	0.88
	MW-79	Annual	2019 - 2022	4	2	0.42	0	0.47	4	6.2	0	0.88
	MW-88	Quarterly	2021 - 2022	6	6	2.4	6	11	5	1.8	0	0.2
	MW-111	Annual	2019 - 2022	4	2	1.2	0	0.47	3	8.6	0	0.88
	MW-112	Annual	2019 - 2022	4	4	1	2	0.35	0	0.71	0	0.88
	MW-115	Annual	2019 - 2022	4	2	0.94	0	0.47	4	150	4	95
Southern Property Boundary Area (SPBA)	MW-22	Annual	2019 - 2022	4	4	4.4	4	8.6	1	0.2	0	0.88
	MW-108S	Annual	2019 - 2022	4	0	0.69	0	0.47	0	0.71	0	0.88
	MW-108D	Annual	2019 - 2022	4	1	0.29	3	0.48	0	0.71	0	0.88
	MW-165	Annual	2019 - 2022	4	4	3.3	4	3.6	0	0.71	0	0.88
	MW-166	Variable	2018 - 2022	21	20	4.9	21	70	1	0.8	0	0.88
	MW-167	Variable	2018 - 2022	22	17	6.9	22	14	0	0.71	0	0.88
	MW-168	Variable	2018 - 2022	21	0	0.69	7	1.1	0	0.71	0	0.88
South Plume Area (SPA)	MW-43D	Annual	2019 - 2022	4	4	5.1	4	6.3	4	7.2	0	0.88
	Cole D	Annual	2019 - 2022	4	3	0.9	4	26	0	0.71	0	0.88
	Cole Steel (MW-12)	Annual	2019 - 2022	4	4	16	3	0.9	4	18	0	0.88
	GM-1D	Annual	2019 - 2022	4	1	0.39	4	8.8	0	0.71	0	0.88
	MW-110	Annual	2019 - 2022	4	4	0.71	4	23	0	0.71	0	1.8
	MW-150	Annual	2019 - 2022	4	4	46	0	0.47	4	44	0	0.88
Codorus Creek Levee Area	MW-101S	Quarterly	2021 - 2022	6	5	0.76	6	4.2	5	0.7	0	0.2
	MW-101D	Quarterly	2021 - 2022	6	6	6.5	6	5.6	6	13	0	0.2
West Side of Codorus Creek	MW-148A (72.5-73)	Annual	2019 - 2022	4	0	0.69	0	0.47	0	0.71	0	0.88
	MW-148A (136-136.5)	Annual	2019 - 2022	4	0	0.69	0	0.47	0	0.71	0	0.88
Northern Site Perimeter (NSP)	MW-5	Quarterly	2021 - 2022	6	4	0.43	0	0.3	6	6	0	0.2
	MW-6	Quarterly	2021 - 2022	6	0	0.3	0	0.3	0	0.3	0	0.2
	MW-82	Annual	2019 - 2022	4	4	1.9	4	1.8	4	2.4	0	0.88
	MW-186	Annual	2020 - 2022	3	0	0.3	0	0.3	0	0.3	0	0.2

Notes:
Regulatory Level - PADEP MSC, equivalent to the USEPA MCL, or the USEPA RSL for regulated substances with no MCL
µg/L - micrograms per liter
Substance not detected and/or maximum detected concentration is not greater then regulatory level.
Maximum detected concentration is greater than regulatory level
Where number of detects = 0, concentration listed is the maximum analytical method detection limit. Method detection limit for vinyl chloride is greater than regulatory level for MW-12, MW-16S, and MW-2.
(1) - RW-2 was abandoned in August 2021.
TCE - Trichloroethene; PCE - Tetrachloroethene; cis12DCE - cis-1,2-Dichloroethene

TABLE 4.2-6
Groundwater Attainment Sample Data Summary (Group 2 Substances)
Former York Naval Ordnance Plant - York, PA

Location at fYNOP	Groundwater Attainment Sample Location Well Identification	Sample Collection Frequency	Sample Collection Period	Number (#) of Samples	Constituent of Concern and Regulatory Level											
					11DCA (2.8 µg/L)		11DCE (7 µg/L)		12DCA (5 µg/L)		TCA (200 µg/L)		Benzene (5 µg/L)		MTBE (20 µg/L)	
					# of Detects	Max. Conc.	# of Detects	Max. Conc.	# of Detects	Max. Conc.	# of Detects	Max. Conc.	# of Detects	Max. Conc.	# of Detects	Max. Conc.
South-Central Site Area (SCSA)	MW-67S	Annual	2019 - 2022	4	0	0.63	4	1.2	0	0.57	4	4.9	0	0.6	0	0.59
	MW-79	Annual	2019 - 2022	4	4	2.9	0	0.55	0	0.57	0	0.6	0	0.6	0	0.59
	MW-111	Annual	2019 - 2022	4	0	0.63	3	0.64	0	0.57	0	0.6	0	0.6	0	0.59
	MW-115	Annual	2019 - 2022	4	4	20	4	3.1	4	1.5	0	0.6	4	9.3	4	28
South Plume Area (SPA)	MW-150	Annual	2019 - 2022	4	0	0.63	4	0.9	0	0.57	0	0.6	0	0.6	0	0.59

Notes:
Regulatory Level - PADEP MSC, equivalent to the USEPA MCL, or the USEPA RSL for regulated substances with no MCL
µg/L - micrograms per liter
Substance not detected and/or maximum detected concentration is not greater then regulatory level
Maximum detected concentration is greater than regulatory level
Where number of detects = 0, concentration listed is the maximum analytical method detection limit
11DCA - 1,1-Dichloroethane; 11DCE - 1,1-Dichlroethene; 12DCA - 1,2-Dichlorethane; TCA - 1,1,1-Trichloroethane; MTBE - Methyl tert-butyl ether

TABLE 4.2-7
Groundwater Attainment Sample Concentration Trend Analysis Results (Group 1 Substances)
Former York Naval Ordnance Plant - York, PA

Location at fYNOP	Groundwater Attainment Sample Location Well Identification	Constituent of Concern											
		TCE			PCE			cis12DCE			Vinyl Chloride		
		M-K 90% CC	M-K 80% CC	LR	M-K 90% CC	M-K 80% CC	LR	M-K 90% CC	M-K 80% CC	LR	M-K 90% CC	M-K 80% CC	LR
Northern Property Boundary Area (NPBA)	MW-3	D			D			NT	D				
	MW-9	D						D			NT	D	
	MW-12	D			D			I					
	MW-16S	NT	I		D			D					
	MW-18S	D						NT	NT	D	D		
	MW-18D	D			NT	NT	D	NT	D		D		
	MW-20S	D			NT	NT	I	D					
	MW-20M	NT	I		I								
	MW-142S							I					
	MW-142D							D					
	MW-143S	D			NT	NT	D						
	MW-143D							I					
	CW-1A	NT	NT	D	D								
	CW-2	NT	D		NT	D		NT	NT	D			
	RW-2 (1)												
	RW-4 (Folk)												
Eastern Site Perimeter (ESP)	MW-2	NT	NT	D	NT	NT	D						
	MW-14	NT	NT	D	NT	NT	I						
	MW-65S	NT	D		NT	NT	I	NT	NT	D			
South-Central Site Area (SCSA)	MW-67S	NT	D		NT	NT	D	NT	D				
	MW-67D	NT	NT	D	NT	D		NT	NT	D			
	MW-69	NT	D					NT	D				
	MW-79	NT	D					D					
	MW-88	NT	NT	D	NT	NT	D	NT	NT	I			
	MW-111	NT	NT	I				NT	NT	I			
	MW-112	NT	NT	I									
	MW-115	NT	NT	D				NT	D		NT	NT	I
Southern Property Boundary Area (SPBA)	MW-22	NT	D		NT	NT	D						
	MW-108S												
	MW-108D				D								
	MW-165	D			D								
	MW-166	D			NT	NT	I						
	MW-167	D			D								
	MW-168				D								
South Plume Area (SPA)	MW-43D	NT	NT	D	NT	D		D					
	Cole D	NT	NT	D	NT	NT	D						
	Cole Steel (MW-12)	NT	NT	I	NT	I		I					
	GM-1D	NT	NT	D	NT	NT	I						
	MW-110	D			NT	D							
	MW-150	NT	D					NT	NT	D			
Codorus Creek Levee Area	MW-101S	NT	NT	I	NT	NT	I	NT	NT	I			
	MW-101D	NT	NT	D	NT	NT	D	NT	D				
West Side of Codorus Creek	MW-148A (72.5-73)												
	MW-148A (136-136.5)												
Northern Site Perimeter (NSP)	MW-5	NT	NT	D				NT	D				
	MW-6												
	MW-82	NT	D		I			NT	D				
	MW-186												

Notes:
Mann-Kendall (M-K) and Liner Regression (LR) Tests using USEPA's ProUCL version 5.2 statistical software package (USEPA, 2022)
CC - Confidence Coefficient

	Trend analysis not performed (e.g., constituent of concern not detected)
NT	No statistically significant trend determined
I	Statistically significant increasing trend at concentration greater than regulatory level
I	Statistically significant increasing trend at concentration less than regulatory level
D	Statistically significant decreasing Trend

(1) - RW-2 was abandoned in August 2021
TCE - Trichloroethene; PCE - Tetrachloroethene; cis12DCE - cis-1,2-Dichloroethene

TABLE 4.2-8
Groundwater Attainment Sample Concentration Trend Analysis Results (Group 2 Substances)
Former York Naval Ordnance Plant - York, PA

Location at fYNOP	Groundwater Attainment Sample Location Well Identification	Constituent of Concern																	
		11DCA			11DCE			12DCA			TCA			Benzene			MTBE		
		M-K 90% CC	M-K 80% CC	LR	M-K 90% CC	M-K 80% CC	LR	M-K 90% CC	M-K 80% CC	LR	M-K 90% CC	M-K 80% CC	LR	M-K 90% CC	M-K 80% CC	LR	M-K 90% CC	M-K 80% CC	LR
South-Central Site Area (SCSA)	MW-67S		C		NT	NT	D				NT	D							
	MW-79	NT	D																
	MW-111				NT	I													
	MW-115	NT	NT	D	NT	D		D						NT	D		NT	NT	D
South Plume Area (SPA)	MW-150				NT	D													

Notes:
Mann-Kendall (M-K) and Liner Regression (LR) Tests using USEPA's ProUCL version 5.2 statistical software package (USEPA, 2022)
CC - Confidence Coefficient

	Trend analysis not performed (e.g., constituent of concern not detected).
NT	No statistically significant trend determined
I	Statistically significant increasing trend at concentration greater than regulatory level
I	Statistically significant increasing trend at concentration less than regulatory level
D	Statistically significant decreasing Trend

11DCA - 1,1-Dichloroethane; 11DCE - 1,1-Dichlroethene; 12DCA - 1,2-Dichlorethane; TCA - 1,1,1-Trichloroethane; MTBE - Methyl tert-butyl ether

TABLE 4.3-1
Water Quality Criteria Application - Surface Water Sampling Locations
Former York Naval Ordnance Plant - York, PA

Surface Water Sampling Location	Pennsylvania Department of Environmental Protection Surface Water Quality Criteria			
	Fish and Aquatic Life		Human Health	
	AFC	CFC	CRL	H
COD-SW-26	X			
COD-SW-6	X	X	X	X
COD-SW-7	X	X	X	X
COD-SW-17	X			
COD-SW-16	X	X		
COD-SW-27	X	X		
COD-SW-15	X			
COD-SW-13	X	X		
COD-SW-28	X	X		
COD-SW-8	X	X		
COD-SW-9	X	X		
COD-SW-29	X	X	X	X

Notes:
AFC - Acute Fish Criteria or Criteria Maximum Concentration
CFC - Chronic Fish Criteria or Criteria Continuous Concentration
CRL - Cancer Risk Level at $1X10^{-6}$
H - Threshold human health criteria
X - Applicable surface water quality criteria from 25 Pa. Code Chapter 93 applies to samples collected from this location

TABLE 4.3-2
PADEP Surface Water Quality Criteria
Former York Naval Ordance Plant - York, PA

Constituent of Concern	Pennsylvania Department of Environmental Protection Surface Water Quality Criteria			
	Fish and Aquatic Life		Human Health	
	AFC (µg/L)	CFC (µg/L)	CRL (µg/L)	H (µg/L)
cis-1,2-Dichloroethene (cis12DCE)	NE	NE	NE	12
Tetrachloroethene (PCE)	700	140	10	NE
Trichloroethene (TCE)	2,300	450	0.6	NE
Vinyl Chloride (VC)	NE	NE	0.02	NE

Notes:

Surface water quality criteria from 25 Pa. Code Chapter 93 - Water Quality Standards (Table 5 - Water Quality Criteria for Toxic Substances). The CRL values for PCE, TCE, and VC were amended on July 10, 2020 and are different than the CRL values in the Cleanup Plan.
AFC - Acute Fish Criteria or Criteria Maximum Concentration
CFC - Chronic Fish Criteria or Criteria Continuous Concentration
CRL - Cancer Risk Level at $1x10^{-6}$
H - Threshold human health criterion
µg/L - micrograms per liter
NE - Criterion not established

TABLE 4.3-3 Monthly Surface Water Monitoring Information Former York Naval Ordnance Plant - York, PA		
Surface Water Sample Collection Date	**Sample Description**	**Average Daily Stream Gage Discharge (1) on Sample Collection Date Cubic Feet Per Second (cfs)**
09/24/21	Monthly Surface Water Sampling Conducted with the WPL Groundwater Extraction System Shut Down	448
10/20/21		92
11/23/21		114
12/17/21		84
01/27/22		141
02/22/22		196
03/24/22		207
04/26/22		225
05/25/22		336
06/21/22		124
07/28/22		93
08/25/22		87
09/23/22		91
10/27/22		105
11/18/22		123
12/21/22		283
01/25/23		278
02/21/23		152
03/22/23		118
04/27/23		120
05/23/23		97
06/21/23		66
07/27/23		84
08/24/23		65
Notes:	(1) Stream Gage Location - USGS 01575500 Codorus Creek near York, PA	

TABLE 4.3-4
Stream Discharge Statistics for Codorus Creek
Former York Naval Ordnance Plant - York, PA

USGS Gaging Station Location	Stucky 2011 (Published)(1)		StreamStats Collection Station Report (Published)(2)		StreamStats Basin Delineation Report (Calculated)(3)	
	Harmonic Mean	7D10Y Low	Harmonic Mean	7D10Y Low	Harmonic Mean	7D10Y Low
01575500 - Codorus Creek Near York (Upstream of fYNOP)	87.9	18.7	89	18.7 (4)	81.2	24
01575585 - Codorus Creek at Pleasureville (Downstream of fYNOP)	N/A	N/A	189	N/A	117	35.5

Notes:
Discharge data reported in cubic feet per second (cfs)
N/A - Discharge data not available
7D10Y Low - 7-day 10-year low flow
(1) Values are published in Stuckey, M.H., and Roland, M.A., 2011, Selected streamflow statistics for stream gage locations in and near Pennsylvania: U.S. Geological Survey (USGS) Scientific Investigations Report 2011–1070, 88 p.
(2) Values are published on USGS StreamStats Data-Collection Station Reports for gaging stations 01575500 and 01575585 (https://streamstats.usgs.gov/ss/)
(3) Values were calculated using USGS StreamStats software (https://streamstats.usgs.gov/ss/)
(4) Controlled 7-day 10-year low flow
(5) Yellow highlighted cells represent discharge values selected as reference values on figures in this Final Report.

TABLE 4.3-5
Precipitation Data for York Airport Weather Station
Former York Naval Ordnance Plant - York, PA

Month	Total Monthly Precipitation (inches)[1]							Normal Monthly Precipitation (inches)[2]
	2017	2018	2019	2020	2021	2022	2023	
Jan	2.6	2.1	1.4	3.0	1.5	2.2	2.3	2.6
Feb	1.8	4.8	1.5	2.3	3.4	2.2	1.3	2.5
Mar	3.0	1.1	5.1	3.1	2.4	2.9	2.6	3.7
Apr	1.4	3.9	3.0	4.1	1.9	2.8	3.6	3.4
May	3.6	4.6	6.3	2.5	3.4	5.4	0.0	4.2
Jun	2.1	5.4	3.9	4.2	0.5	1.8	2.2	3.2
Jul	5.0	11.7	5.0	3.0	3.9	4.1	3.8	4.3
Aug	4.0	5.7	0.9	2.7	8.1	0.6	0.8	3.8
Sep	2.3	7.2	0.7	0.9	11.2	2.8	--	4.8
Oct	3.7	2.0	6.1	2.9	2.7	3.1	--	3.6
Nov	2.3	7.9	1.5	3.1	1.0	2.5	--	3.1
Dec	0.8	4.2	4.0	2.7	0.7	3.6	--	3.1
Year	**Calculated Total Annual Monthly Precipitation (inches)**							**Normal Annual Precipitation (inches)[2]**
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	
	32.5	60.6	39.2	34.6	40.6	33.8	16.5	42.1

Year 1 (Sept 2019 - Aug 2020) Calculated Total Annual Precipitation = 37.2 inches
Year 2 (Sept 2020 - Aug 2021) Calculated Total Annual Precipitation = 34.7 inches
Year 3 (Sept 2021 - Aug 2022) Calculated Total Annual Precipitation = 37.4 inches
Year 4 (Sept 2022 - Aug 2023) Calculated Total Annual Precipitation = 28.5 inches

Notes:

(1) Monthly precipitation data were obtained from the PA State Climatologist website: http://www.climate.psu.edu/data/ (York, PA airport weather station).

(2) Normal monthly and annual precipitation values are from the National Oceanic and Atmospheric Administration precipitation normals from the latest 30-year period (1991-2020) for the York, PA airport weather station. https://www.ncei.noaa.gov/access/us-climate-normals/

(3) Yellow highlighted cells represent the 24-month period of fYNOP surface water monitoring with the West Parking Lot (WPL) extraction system operating.

(4) Blue highlighted cells represent the 24-month period of fYNOP surface water monitoring with the WPL extraction system shutdown.

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13
Sample Date	9/23/2019	10/24/2019	11/21/2019	12/18/2019	1/23/2020	2/24/2020	3/25/2020	4/28/2020	5/26/2020	6/24/2020	7/28/2020	8/25/2020	9/25/2020	10/29/2020	11/30/2020	12/23/2020	1/26/2021	2/25/2021	3/24/2021	4/26/2021	5/25/2021	6/24/2021	7/29/2021	8/26/2021	9/24/2021	10/20/2021	11/23/2021
Parameter																											
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	1 U	1.0 UJ	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	1.1 J	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 J	5 U	5 U	5 U	5 U	5 U
2-Hexanone	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 J	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 J	5 U	5 U	5 U	5 U	5 U
Acetone	5 U	5.0 U	5.0 U	5.0 UJ	5 U	5 UJ	5 UJ	4.3 UJ	1.5 J	1.9 U	2.1 U	1.8 U	5 U	2.1 J	3.5 J	1.5 J	1.6 J	1.6 J	5 U	5 U	1.3 J	1.9 J	2.4 J	1.8 J	1.4 J	1.5 J	0.91 J
Benzene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1.0 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.092 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
Carbon Tetrachloride	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.094 J	0.5 U	0.5 U	0.5 U
Chloromethane	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.07 J	0.48 J	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.063 J	0.5 U	0.07 J	0.5 J	0.5 U	0.06 J	0.5 U	0.065 J	0.5 U
cis-1,2-Dichloroethene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.08 J	0.083 J	0.086 J	0.12 J	0.12 J	0.051 J	0.056 J	0.078 J	0.092 J	0.051 J	0.085 J	0.075 J	0.11 J	0.13 J	0.14 J	0.24 J	0.088 J	0.2 J	0.17 J
cis-1,3-Dichloropropene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.072 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.064 J	0.5 U	0.074 J	0.5 U	0.5 U	0.064 J	0.5 U	0.06 J	0.5 U	0.5 U	0.5 U	0.5 U	0.14 J	0.15 J	0.67	0.56
Toluene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.091 J	0.5 U	0.5 U	0.5 U	0.076 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.081 J	0.5 U	0.5 U
trans-1,2-Dichloroethene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.074 J	0.073 J	0.13 J	0.13 J	0.5 U	0.5 U	0.069 J	0.5 U	0.5 U	0.097 J	0.071 J	0.092 J	0.1 J	0.12 J	0.22 J	0.16 J	0.33 J	0.2 J
Vinyl Chloride	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	2 U	2.0 U	2.0 U	2.0 U	2 U	2 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	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-13	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15 DUP	COD-SW-15	COD-SW-15
Sample Date	12/17/2021	1/27/2022	2/22/2022	3/24/2022	4/26/2022	5/25/2022	6/21/2022	7/28/2022	8/25/2022	9/23/2022	10/27/2022	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023	4/27/2023	5/23/2023	6/21/2023	7/27/2023	8/24/2023	9/23/2019	10/24/2019	11/21/2019	11/21/2019	12/18/2019	1/23/2020
Parameter																											
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.092 J	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1 UJ
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 UJ
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 UJ
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
2-Butanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.3 J	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	5.0 U	5.0 U	5.0 UJ	5.0 U	5 U
2-Hexanone	5 U	5 UJ	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	5 U	5 U	5 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5 U
4-Methyl-2-Pentanone	5 U	5 UJ	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	5 U	5 U	5 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5 U
Acetone	1.5 J	1.1 J	2 J	1.7 J	1.2 J	2.1 J	5 U	3.3 J	2.4 J	1.1 J	5 U	5 U	5 U	1.1 J	5 U	5 U	5 U	5 U	3 J	5 U	5 U	5 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5 UJ
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 UJ
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 UJ
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 UJ
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 UJ
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U	0.24 J	0.1 J	0.14 J	0.11 J	0.34 J	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 UJ
cis-1,2-Dichloroethene	0.17 J	0.13 J	0.11 J	0.11 J	0.087 J	0.087 J	0.14 J	0.16 J	0.23 J	0.13 J	0.21 J	0.17 J	0.12 J	0.15 J	0.23 J	0.23 J	0.1 J	0.22 J	0.47 J	0.22 J	0.21 J	0.79 J	0.97 J	0.86 J	1.0 UJ	0.83 J	0.87 J
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Tetrachloroethene	0.65	0.67	0.5	0.42 J	0.46 J	0.54	0.76	0.95	0.56	0.92	1.2	0.98	0.47 J	0.55	0.66	0.71	0.68	1.1	0.86	1.2	0.92	2.9	2.6	2.7	1.0 UJ	3.0	2.4
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U	0.085 J	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 UJ
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 U
Trichloroethene	0.19 J	0.2 J	0.13 J	0.13 J	0.1 J	0.086 J	0.15 J	0.14 J	0.17 J	0.13 J	0.23 J	0.19 J	0.15 J	0.16 J	0.26 J	0.29 J	0.5 U	0.19 J	0.28 J	0.18 J	0.18 J	0.96 J	1.3	0.99 J	1.0 UJ	0.86 J	0.86 J
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1 UJ
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	2.0 U	2.0 U	2.0 UJ	2.0 U	2 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15
Sample Date	2/24/2020	3/25/2020	4/28/2020	5/26/2020	6/24/2020	7/28/2020	8/25/2020	9/25/2020	10/29/2020	11/30/2020	12/23/2020	1/26/2021	2/25/2021	3/24/2021	4/26/2021	5/25/2021	6/24/2021	7/29/2021	8/26/2021	9/24/2021	10/20/2021	11/23/2021	12/17/2021	1/27/2022	2/22/2022	3/24/2022	4/26/2022
Parameter																												
Volatile Organic Compound																												
1,1,1,2-Tetrachloroethane	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	1 U	1 U	1 UJ	0.5 U	0.13 J	0.12 J	0.14 J	0.094 J	0.071 J	0.5 U	0.15 J	0.092 J	0.1 J	0.14 J	0.12 J	0.086 J	0.11 J	0.12 J	0.19 J	0.16 J	0.18 J	0.19 J	0.18 J	0.24 J	0.29 J	0.28 J	0.32 J
1,1,2,2-Tetrachloroethane	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
1,1,2-Trichloroethane	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.073 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.071 J	0.5 U	0.5 U	0.5 U	0.5 U	0.095 J	0.083 J	0.086 J	0.11 J	0.11 J	0.13 J	0.15 J	0.13 J	0.14 J
1,1-Dichloroethene	1 U	1 U	1 U	0.083 J	0.08 J	0.089 J	0.092 J	0.067 J	0.5 U	0.5 U	0.1 J	0.073 J	0.064 J	0.11 J	0.087 J	0.077 J	0.09 J	0.086 J	0.13 J	0.12 J	0.11 J	0.13 J	0.12 J	0.13 J	0.18 J	0.17 J	0.17 J
1,2-Dibromoethane	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	5 UJ	5 UJ	5 UJ	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U
Acetone	5 UJ	5 UJ	5 U	5 U	5 U	1.7 U	5 U	5 U	5 UJ	2.6 J	5 U	5 U	1.2 J	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	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	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Carbon Disulfide	1 U	1 U	1 UJ	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Carbon Tetrachloride	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1 U	1 U	1 U	0.26 J	0.26 J	0.25 J	0.36 J	0.31 J	0.25 J	0.11 J	0.24 J	0.26 J	0.14 J	0.26 J	0.27 J	0.26 J	0.3 J	0.29 J	0.28 J	0.29 J	0.33 J	0.34 J	0.31 J	0.24 J	0.27 J	0.27 J	0.29 J
Chloromethane	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.061 J	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	1.4	1 U	1.2	0.83	0.77	0.75	0.85	0.7	0.66	0.23 J	0.84	0.66	0.43 J	0.78	0.69	0.63	0.66	0.67	0.89	0.85	0.88	0.93	0.86	1.5	1.9	1.7	1.8
cis-1,3-Dichloropropene	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	1 U	1 UJ	1 UJ	0.05 J	0.5 U	0.5 U	0.054 J	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.085 J	0.051 J	0.5 U	0.5 U	0.5 U
Methylene chloride	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	3.1 J	2.2	2.8	3.1	2.5	2.5	3	2.2	2	0.64	2.8	2.1	1.5	2.9	2.4	2.2	2.2	2.2	3.3 J	2.9	3.6	4.8	4.7	6.1	6.4	6.5	6
Toluene	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.088 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	1.4	1 U	1.5	1	0.89	0.89	1.1	0.86	0.79	0.29 J	0.97	0.78	0.53	0.98	0.86	0.75	0.8	0.83	1.1	0.95	1	1.1	1	1.4	1.7	1.7	1.7
Vinyl Chloride	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	2 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	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16
Sample Date	5/25/2022	6/21/2022	7/28/2022	8/25/2022	9/23/2022	10/27/2022	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023	4/27/2023	5/23/2023	6/21/2023	7/27/2023	8/24/2023	9/23/2019	10/24/2019	11/21/2019	12/18/2019	1/23/2020	2/24/2020	3/25/2020	4/28/2020	5/26/2020	6/24/2020	7/28/2020
Parameter																											
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.34 J	0.31 J	0.27 J	0.25 J	0.26 J	0.4 J	0.45 J	0.42 J	0.37 J	0.48 J	0.38 J	0.25 J	0.22 J	0.24 J	0.41 J	0.23 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 UJ	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.15 J	0.12 J	0.12 J	0.13 J	0.11 J	0.15 J	0.18 J	0.16 J	0.14 J	0.15 J	0.14 J	0.5 U	0.5 U	0.5 U	0.15 J	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.2 J	0.18 J	0.16 J	0.12 J	0.12 J	0.18 J	0.23 J	0.2 J	0.19 J	0.2 J	0.15 J	0.18 J	0.16 J	0.14 J	0.18 J	0.12 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U
2-Butanone	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	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U
2-Hexanone	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	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U
4-Methyl-2-Pentanone	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	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U
Acetone	1.2 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.1 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 UJ	5 U	5 UJ	5 UJ	5 U	2.7 J	2.5 U	1.5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 UJ	1.0 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.14 J	1 U	1 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U
Chloroform	0.27 J	0.34 J	0.35 J	0.41 J	0.33 J	0.35 J	0.34 J	0.28 J	0.27 J	0.31 J	0.29 J	0.22 J	0.24 J	0.23 J	0.22 J	0.24 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.29 J	0.12 J	0.5 U	0.12 J FL	0.21 J	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.093 J
cis-1,2-Dichloroethene	2.1	1.3	1.4	1.4	1.3	2.3	2.2	2.4	2.3	2.3 J	1.4	1.2	0.94	1.1	1.9	0.76	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.09 J	0.082 J	0.087 J
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	6.5	5.7	5	4.8	5.5	5.5	5.8	6.4	5.5	7	6.3	4.6	4.3 J	3.9	6	4.2	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.075 J	0.5 U	0.5 U
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.1 J	0.1 J	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Trichloroethene	1.9	1.6	1.4	1.4	1.2	1.6	1.8	1.9	1.8	2.1	1.3	1.1	0.94	1.1	1.7	0.97	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.16 J	0.078 J	0.078 J
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	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	2.0 U	2.0 U	2.0 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16
Sample Date	8/25/2020	9/25/2020	10/29/2020	11/30/2020	12/23/2020	1/26/2021	2/25/2021	3/24/2021	4/26/2021	5/25/2021	6/24/2021	7/29/2021	8/26/2021	9/24/2021	10/20/2021	11/23/2021	12/17/2021	1/27/2022	2/22/2022	3/24/2022	4/26/2022	5/25/2022	6/21/2022	7/28/2022	8/25/2022	9/23/2022	10/27/2022
Parameter																											
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.067 J	0.072 J	0.5 U	0.062 J	0.5 U	0.061 J	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.086 J	0.13 J
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	1 J	5 U	5 U	5 U	5 U	5 U	5 UJ	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	5 U	5 U
2-Hexanone	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	1.7 J	5 U	2.2 J	3.4 J	1.1 J	1.9 J	1.5 J	5 U	5 U	1.3 J	2 J	1.4 J	1.6 J	1.4 J	1.4 J	1.2 J	2.3 J	1.2 J	1.6 J	1.8 J	1.4 J	2.1 J	5 U	2.9 J	1.6 J	1.3 J	5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	0.11 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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.097 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	0.21 J	0.13 J	0.5 U	0.5 U	0.5 UJ	0.064 J	0.5 U	0.061 J	0.5 U	0.065 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.071 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.12 J	0.11 J	0.5 U	0.5 U	0.068 J	0.092 J	0.5 U	0.082 J	0.076 J	0.11 J	0.5 U	0.18 J	0.23 J	0.078 J	0.19 J	0.18 J	0.15 J	0.14 J	0.11 J	0.12 J	0.097 J	0.086 J	0.13 J	0.18 J	0.17 J	0.15 J	0.22 J
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.072 J	0.068 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.065 J	0.062 J	0.5 U	0.062 J	0.12 J	0.15 J	0.97	0.93	0.71	0.99	0.74	0.88	0.76	0.52	0.76	1.6	0.57	1.4	1.8
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.084 J	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.092 J	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.13 J	0.11 J	0.087 J	0.5 U	0.5 U	0.1 J	0.5 U	0.09 J	0.081 J	0.087 J	0.5 U	0.11 J	0.19 J	0.5 U	0.35 J	0.24 J	0.18 J	0.2 J	0.14 J	0.14 J	0.11 J	0.081 J	0.14 J	0.18 J	0.17 J	0.14 J	0.22 J
Vinyl Chloride	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-16	COD-SW-17	COD-SW-17	COD-SW-17	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17
Sample Date	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023	4/27/2023	5/23/2023	6/21/2023	7/27/2023	8/24/2023	10/9/2019	10/24/2019	11/21/2019	12/18/2019	12/18/2019	1/23/2020	2/24/2020	2/24/2020	3/25/2020	3/25/2020	4/28/2020	4/28/2020	5/26/2020	5/26/2020	6/24/2020
Parameter																									
Volatile Organic Compound																									
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.095 J	0.11 J	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.1 J
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U
Acetone	5 U	5 U	1.3 J	3.8 J	5 U	5 U	5 U	3.3 J	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5 U	5 UJ	5 UJ	5 U	5 U	5 UJ	4.7 UJ	1.3 J	1.2 J	1.2 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.11 J
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.28 J	0.11 J	0.37 J	0.12 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.21 J	0.12 J	0.15 J	0.25 J	0.25 J	0.11 J	0.24 J	0.48 J	0.23 J	0.21 J	0.99 J	1.3	1.0	1.0 U	1.0 U	0.99 J	1.8	2.1	1 U	1 U	1 U	0.74 J	0.52	0.53	1.8
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	1.5	0.71	0.87	0.67	0.61	0.83	0.68	1.2	1.4	1.1	3.0	3.1	3.8	2.0	1.0 U	3.1	6.6 J	7.5 J	1 U	1 U	1.2	1.4	1.3	1.3	3.4
Toluene	0.5 U	0.5 U	0.5 U	0.15 J	0.5 U	0.5 U	0.089 J	0.5 U	0.085 J	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.074 J
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.21 J	0.16 J	0.17 J	0.29 J	0.26 J	0.096 J	0.21 J	0.32 J	0.17 J	0.18 J	1.2	1.6	1.5	1.0 U	1.0 U	1.2	2.5	2.8	1 UJ	1 U	1 U	0.69 J	0.68	0.67	2
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	0.5 U	0.5 U	0.25 J
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP
Sample Date	6/24/2020	7/28/2020	7/28/2020	8/25/2020	8/25/2020	9/25/2020	9/25/2020	10/29/2020	10/29/2020	11/30/2020	11/30/2020	12/23/2020	12/23/2020	1/26/2021	1/26/2021	2/25/2021	2/25/2021	3/24/2021	3/24/2021	4/26/2021	4/26/2021	5/25/2021	5/25/2021
Parameter																							
Volatile Organic Compound																							
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.076 J	0.11 J	0.11 J	0.27 J	0.27 J	0.11 J	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.076 J	0.12 J	0.12 J	0.5 U	0.5 U	0.084 J	0.11 J	0.071 J	0.068 J	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.098 J	0.095 J	0.087 J	0.16 J	0.14 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.071 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.071 J	0.069 J	0.073 J	0.15 J	0.14 J	0.061 J	0.075 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.094 J	0.09 J	0.5 U	0.5 U	0.5 U	0.087 J	0.063 J	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	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	5 UJ	5 UJ	5 U	5 U	5 U	5 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U
Acetone	1.1 U	1.1 U	1.9 U	1.3 U	5 U	5 U	5 U	3.3 J	3.1 J	3 J	3.4 J	5 U	5 U	5 U	5 U	1.5 J	1.5 J	5 U	5 U	5 U	5 U	1.2 J	1.5 J
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	0.069 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	0.071 J
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.099 J	0.13 J	0.13 J	0.29 J	0.29 J	0.33 J	0.3 J	0.1 J	0.1 J	0.5 U	0.5 U	0.16 J	0.15 J	0.24 J	0.25 J	0.5 U	0.5 U	0.13 J	0.16 J	0.13 J	0.12 J	0.5 U	0.5 U
Chloromethane	0.5 U	0.5 U	0.5 U	1.2	0.58	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.061 J	0.081 J
cis-1,2-Dichloroethene	1.7	1.1	1.1	1.6	1.6	0.78	0.82	0.14 J	0.5 U	0.5 U	0.5 U	0.65	0.55	0.81	0.81	0.051 J	0.5 U	0.57	0.76	0.8	0.81	0.36 J	0.62 J
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.12 J	0.087 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	3.2	3	3.1	7.1	6.9	2.3	2.4	0.44 J	0.3 J	0.5 U	0.5 U	2.3	1.9	3.3	3.2	0.5 U	0.5 U	2.1	3	2.4	2.4	0.54 J	1
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.076 J
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	1.8	1.4	1.4	2.8	2.7	1	1.1	0.28 J	0.31 J	0.5 U	0.5 U	0.86	0.78	1.2	1.2	0.5 U	0.5 U	0.88	1.2	0.98	0.97	0.35 J	1.2
Vinyl Chloride	0.22 J	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17
Sample Date	6/24/2021	6/24/2021	7/29/2021	7/29/2021	8/26/2021	8/26/2021	9/24/2021	9/24/2021	10/20/2021	10/20/2021	11/23/2021	11/23/2021	12/17/2021	12/17/2021	1/27/2022	1/27/2022	2/22/2022	2/22/2022	3/24/2022	3/24/2022	4/26/2022	4/26/2022	5/25/2022
Parameter																							
Volatile Organic Compound																							
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.12 J	0.13 J	0.5 U	0.5 U	0.33 J	0.36 J	0.64	0.68	4.5	4.6	6.2	6.1	2.8 J	2.7 J	7.1	7	7.1	7.1	7.5	7.4	6.8	6.7	2.8
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.19 J	0.22 J	0.13 J	0.14 J	0.63	0.66	0.91	0.9	0.56 J	5 U	1.3	1.2 J	1.2	1.2	1.2	1.2	1.3	1.3	0.58
1,1-Dichloroethene	0.085 J	0.1 J	0.5 U	0.5 U	0.22 J	0.24 J	0.085 J	0.088 J	0.5	0.52	0.56	0.55	0.32 J	5 U	0.57	5 U	0.57	0.59	0.61	0.61	0.58	0.58	0.27 J
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	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 UJ	50 UJ	5 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	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 UJ	50 UJ	5 UJ	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	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 UJ	50 UJ	5 UJ	50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	1.1 J	5 UJ	1.9 J	1.6 J	5 U	5 U	0.94 J	0.91 J	5 U	5 U	5 UJ	5 UJ	1.2 J	50 UJ	5 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	2 J
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	10 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Carbon Disulfide	1 U	1 U	0.089 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.073 J	10 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.28 J	0.29 J	0.5 U	0.5 U	0.23 J	0.25 J	0.092 J	0.099 J	0.32 J	0.33 J	0.31 J	0.3 J	0.3 J	5 U	0.22 J	5 U	0.25 J	0.24 J	0.24 J	0.23 J	0.25 J	0.25 J	0.1 J
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.81	0.83	0.2 J	0.23 J	1.7	1.8	0.97	1.1	3.9	4	4.7	4.6	2.5 J	2.4 J	4.7	4.6 J	4.4	4.4	4.2	4.2	3.9	3.9	3.4
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.06 J	5 U	0.054 J	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	3.5	3.5	0.23 J	0.28 J	8.4	9.2	9	9.7	51	49	61	60	31	31	80	94	84	86	88	87	77	77	28
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	1.1	1.3	0.2 J	0.2 J	3.4	3.7	2.5	2.6	11	12	9.4	9.2	4.5 J	4.2 J	6.3	6.1	5.4	5.4	5	5	4.8	4.8	2.4
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 J
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	10 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP
Sample Date	5/25/2022	6/21/2022	6/21/2022	7/28/2022	7/28/2022	8/25/2022	8/25/2022	9/23/2022	9/23/2022	10/27/2022	10/27/2022	11/18/2022	11/18/2022	12/21/2022	12/21/2022	1/25/2023	1/25/2023	2/21/2023	2/21/2023	3/22/2023	3/22/2023	4/27/2023	4/27/2023
Parameter																							
Volatile Organic Compound																							
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	2.8	7.9	7.9	4	4	6.2	6 J	5.9	6	6.2	6.4	5.9	5.7	6.1	6.3	5.4	5.4	7.7	7.6	5.1	4.9	3.6	3.6
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.59	1.3	1.3	0.85	0.83	1.4	1.4	1.2	1.2	1.2	1.2	1.1	1.1	1.2	1.2	1	1	1.4	1.4	1.3	1.3	0.78	0.77
1,1-Dichloroethene	0.28 J	0.68	0.66	0.31 J	0.31 J	0.44 J	0.44 J	0.57	0.54	0.51	0.53	0.51	0.51	0.56	0.56 U	0.49 J	0.47 J	0.65	0.63	0.41 J	0.4 J	0.38 J	0.38 J
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	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	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	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	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	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	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	1.7 J	5 U	5 U	2.4 J	2.5 J	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	5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	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 Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.1 J	0.29 J	0.3 J	0.16 J	0.16 J	0.36 J	0.34 J	0.3 J	0.3 J	0.31 J	0.31 J	0.29 J	0.3 J	0.25 J	0.27 J	0.25 J	0.25 J	0.29 J	0.29 J	0.19 J	0.19 J	0.17 J	0.17 J
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 UJ	0.5 U	0.5 U
cis-1,2-Dichloroethene	3.3	4.3	4.2	3.8	3.8	4.3	4.1	2.9	3	3	3	3.4	3.3	3.5	3.7	3.1	3.1	3.4	3.5	4.7	4.3	2.1	2
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	29	76	77	34	40	78	79	66	65	71	68	65	67	69	70	60	65	84	81	49	50	44	49
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	2.4	6.1	6.1	3.2	3.1	6.1	5.9	4.6	4.6	3.7	3.8	4.3	4.1	4.4	4.4	3.6	3.6	4.3	4.4	4	3.7	2.3	2.4
Vinyl Chloride	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.12 J	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-17	COD-SW-17 DUP	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26 DUP	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26
Sample Date	5/23/2023	5/23/2023	6/21/2023	6/21/2023	7/27/2023	7/27/2023	8/24/2023	8/24/2023	9/23/2019	10/24/2019	11/21/2019	12/18/2019	1/23/2020	1/23/2020	2/24/2020	3/25/2020	4/28/2020	5/26/2020	6/24/2020	7/28/2020	8/25/2020	9/25/2020	10/29/2020	11/30/2020	12/23/2020
Parameter																									
Volatile Organic Compound																									
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	2.6	2.9	2.9	3.7	12	12	8.5	8.6	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 UJ	1.0 U	1.0 U	1 U	1 U	1 UJ	1 UJ	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.62	0.7	0.7	0.95	2.6	2.5	1.8	1.8	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.29 J	0.32 J	0.26 J	0.36 J	0.99	0.94	0.71	0.68	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 U	0.12 J	0.5 U	0.17 J	0.18 J	0.17 J	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 UJ	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 UJ	5 U	5 UJ	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U
Acetone	5 U	5 U	1.8 J	1.6 J	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 UJ	5 U	5 U	5 UJ	5 U	5 U	5 U	1.4 U	5 U	1.8 U	5 U	3.1 UJ	2.3 J	2.1 J
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 UJ	1.0 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.16 J	0.16 J	0.17 J	0.19 J	0.2 J	0.2 J	0.22 J	0.23 J	1 U	0.98 J	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 U	0.47 J	0.25 J	0.64	0.76	0.86	0.5 U	0.093 J	0.18 J
Chloromethane	0.23 J	0.5 U	0.19 J	0.1 J	0.11 J	0.46 J	0.5 U	0.1 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.43 J	0.5 U	0.5 U	0.5 U	0.5 UJ
cis-1,2-Dichloroethene	2.2	2.8	2.9	4.5	5.7	5.4	2.5	2.4	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 U	0.072 J	0.077 J	0.091 J	0.075 J	0.083 J	0.064 J	0.5 U	0.06 J
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.14 J	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	35	34	46	36	140	130	90	93	5.1	4.2	4.7	1.0	4	4	0.55 J	1 U	1.6 J	3.1	1.5	3.6	3.9	3.7	0.5 U	0.5 U	0.72
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	1.7	2	2.3	3	6.7	6.4	4.7	4.7	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.19 J	0.19 J	0.2 J	0.5 U	0.063 J	0.5 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.14 J	0.11 J	0.11 J	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2.0 U	2.0 U	2.0 U	2 U	2 U	2 UJ	2 U	2 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26
Sample Date	1/26/2021	2/25/2021	3/24/2021	4/26/2021	5/25/2021	6/24/2021	7/29/2021	8/26/2021	9/24/2021	10/20/2021	11/23/2021	12/17/2021	1/27/2022	2/22/2022	3/24/2022	4/26/2022	5/25/2022	6/21/2022	7/28/2022	8/25/2022	9/23/2022	10/27/2022	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023
Parameter																											
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.095 J	0.5 U	0.091 J	0.19 J	0.21 J	0.16 J	0.5 U	0.13 J	0.5 U	0.21 J	0.2 J	0.18 J	0.11 J	0.1 J	0.097 J	0.11 J	0.074 J	0.19 J	0.17 J	0.1 J	0.13 J	0.12 J	0.17 J	0.13 J	0.5 U	0.16 J	0.16 J
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	0.97 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	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	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	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
Acetone	2.6 J	1.4 J	5 U	5 U	5 U	1 J	1.3 J	0.93 J	1 J	5 U	5 U	5 UJ	5 U	5 U	0.9 J	0.95 J	2 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.053 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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 Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.35 J	0.11 J	0.31 J	0.58	0.59	0.6	0.3 J	0.6	0.18 J	0.74	0.8	0.94	0.69	0.58	0.41 J	0.48 J	0.23 J	0.69	0.71	0.73	0.6	0.49 J	0.59	0.42 J	0.18 J	0.5	0.47 J
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.15 J
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.069 J	0.067 J	0.5 U	0.08 J	0.12 J	0.1 J	0.065 J	0.063 J	0.093 J	0.073 J	0.053 J	0.065 J	0.074 J	0.055 J	0.061 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.056 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	2	0.42 J	2.1	4.5	4	3.2	1.3	3.4	0.74	3.7	4.1	3.4	3.3	2.9	2.3	2.9	1.4	4.2	4.2	3.8	4	3.1	3.8	2.9	1.1	4.1	4.2
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.13 J	0.5 U	0.14 J	0.18 J	0.17 J	0.16 J	0.12 J	0.17 J	0.12 J	0.18 J	0.2 J	0.2 J	0.14 J	0.15 J	0.14 J	0.14 J	0.093 J	0.16 J	0.17 J	0.18 J	0.15 J	0.16 J	0.17 J	0.18 J	0.15 J	0.18 J	0.17 J
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-26	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27
Sample Date	4/27/2023	5/23/2023	6/21/2023	7/27/2023	8/24/2023	9/23/2019	10/24/2019	11/21/2019	12/18/2019	1/23/2020	2/24/2020	3/25/2020	4/28/2020	5/26/2020	6/24/2020	7/28/2020	8/25/2020	9/25/2020	10/29/2020	11/30/2020	12/23/2020	1/26/2021	2/25/2021	3/24/2021	4/26/2021	5/25/2021	6/24/2021
Parameter																											
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 UJ	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.17 J	0.14 J	0.15 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 U	5 UJ	5 U	5 U	5 U	5 U	0.66 J	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U
Acetone	5 U	5 U	1.3 J	5 U	5 U	5.4 J	5.0 U	5.0 U	5.0 UJ	5 U	3.4 J	5 U	5 U	2.1 J	2.5 U	2.9 U	3.8 U	5 U	2.7 J	4.2 J	1.9 J	2.3 J	1.5 J	5 U	5 U	1.9 J	2.9 J
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.086 J	1 U	1 U	1 U	0.12 J	1 U	0.067 J	1 U	1 U	0.062 J	1 U	0.073 J	0.086 J	1 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.17 J	0.12 J	0.5	0.43 J	0.58	1 U	1.2	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	0.1 J	0.13 J	0.15 J	0.27 J	0.24 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.075 J	0.12 J	0.5 U	0.63	0.5 U	0.06 J	0.5 U	0.5 UJ	0.5 U	0.5 U	0.066 J	0.5 U	0.069 J	0.063 J
cis-1,2-Dichloroethene	0.1 J	0.21 J	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.079 J	0.087 J	0.069 J	0.09 J	0.11 J	0.068 J	0.05 J	0.062 J	0.11 J	0.5 U	0.079 J	0.066 J	0.094 J	0.11 J
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.99	0.26 J	3.8	3.1	3.8	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.079 J	0.12 J	0.5 U	0.5 U	0.5 U	0.061 J	0.5 U	0.068 J	0.13 J	0.063 J	0.5 U	0.064 J	0.079 J	0.5 U
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.092 J	0.5 U	0.5 U	0.5 U	0.072 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.084 J	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.11 J	0.18 J	0.18 J	0.16 J	0.16 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.097 J	0.5 U	0.089 J	0.11 J	0.094 J	0.072 J	0.5 U	0.15 J	0.5 U	0.096 J	0.072 J	0.084 J	0.5 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	2 U	2.0 U	2.0 U	2.0 U	2 U	2 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	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-27	COD-SW-28
Sample Date	7/29/2021	8/26/2021	9/24/2021	10/20/2021	11/23/2021	12/17/2021	1/27/2022	2/22/2022	3/24/2022	4/26/2022	5/25/2022	6/21/2022	7/28/2022	8/25/2022	9/23/2022	10/27/2022	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023	4/27/2023	5/23/2023	6/21/2023	7/27/2023	8/24/2023	9/23/2019
Parameter																											
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
2-Butanone	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	1.3 J	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
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	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	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	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	5 U	5 U	5 U
Acetone	1.5 J	2 J	1.4 J	2.4 J	1.2 J	0.94 J	1.1 J	1.6 J	1.5 J	1.6 J	2.8 J	5 U	3 J	2.3 J	1.7 J	5 U	5 U	5 U	5 U	2 J	5 U	5 U	5 U	2.3 J	5 U	5 U	5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Carbon Disulfide	1 U	1 U	1 U	0.13 J	0.073 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.11 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
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Chloroform	0.16 J	0.13 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.097 J	0.5 U	0.5 U	0.13 J	0.5 U	0.5 U	1 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.068 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 J	0.5 U	0.14 J	0.13 J	0.5 U	0.5 U	1 U
cis-1,2-Dichloroethene	0.2 J	0.19 J	0.07 J	0.5 U	0.11 J	0.13 J	0.082 J	0.1 J	0.1 J	0.072 J	0.081 J	0.09 J	0.12 J	0.14 J	0.5 U	0.23 J	0.2 J	0.11 J	0.14 J	0.21 J	0.24 J	0.13 J	0.24 J	0.39 J	0.18 J	0.12 J	1 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Tetrachloroethene	0.29 J	0.14 J	0.5 U	0.094 J	0.098 J	0.074 J	0.07 J	0.09 J	0.082 J	0.5 U	0.082 J	0.5 U	0.5 U	0.5 U	0.5 U	0.56	0.2 J	0.5 U	0.5 U	0.5 U	0.32 J	0.5 U	0.5 U	0.58	0.5 U	0.26 J	1 U
Toluene	0.5 U	0.085 J	0.089 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.089 J	0.081 J	0.081 J	0.5 U	1 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Trichloroethene	0.24 J	0.17 J	0.5 U	0.18 J	0.15 J	0.17 J	0.14 J	0.12 J	0.14 J	0.089 J	0.08 J	0.1 J	0.14 J	0.13 J	0.084 J	0.24 J	0.2 J	0.14 J	0.15 J	0.25 J	0.27 J	0.1 J	0.18 J	0.35 J	0.14 J	0.15 J	1 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28
Sample Date	10/24/2019	11/21/2019	12/18/2019	1/23/2020	2/24/2020	3/25/2020	4/28/2020	5/26/2020	6/24/2020	7/28/2020	8/25/2020	9/25/2020	10/29/2020	11/30/2020	12/23/2020	1/26/2021	2/25/2021	3/24/2021	4/26/2021	5/25/2021	6/24/2021	7/29/2021	8/26/2021	9/24/2021	10/20/2021	11/23/2021	12/17/2021
Parameter																											
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	1.0 UJ	1.0 U	1.0 U	1 U	1 U	1 UJ	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.85 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
2-Hexanone	5.0 U	5.0 U	5.0 U	5 U	5 UJ	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 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
4-Methyl-2-Pentanone	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Acetone	5.0 U	5.0 U	5.0 UJ	5 U	5 UJ	5 U	5 U	2.7 J	5 U	5 U	3.1 U	5 U	3.3 J	2.4 J	2.2 J	3.7 J	2.2 J	5 U	5 U	2.6 J	1.7 J	3 J	1.7 J	3.3 J	2.2 J	1.5 J	1.2 J
Benzene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.07 J	1 U	1 U	1 U	0.085 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
Carbon Tetrachloride	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.097 J	0.1 J	0.5 U	0.5 U	0.5 U	0.09 J	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.093 J	0.11 J	0.22 J	0.15 J	0.13 J	0.1 J	0.5 U
Chloromethane	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.56	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.07 J	0.066 J	0.5 U	0.063 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.085 J	0.5 U	0.5 U	0.098 J	0.5 U	0.5 U	0.5 U	0.5 U	0.059 J	0.5 U	0.5 U	0.059 J	0.5 U	0.073 J	0.14 J	0.5 U	0.5 U	0.099 J	0.11 J	0.11 J
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.14 J	0.075 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.092 J	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.13 J	0.087 J	0.08 J	0.11 J	0.078 J	0.088 J	0.5 U	0.14 J	0.08 J	0.11 J	0.068 J	0.11 J	0.087 J	0.096 J	0.1 J	0.081 J	0.09 J	0.22 J	0.19 J	0.16 J
Toluene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.098 J	0.098 J	0.5 U	0.5 U	0.5 U	0.58	0.87	0.072 J	0.5 U	0.5 U	0.092 J	0.089 J	0.13 J	0.11 J	0.5 U	0.5 U	0.18 J	0.072 J	0.5 U	0.5 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.098 J	0.5 U	0.5 U	0.097 J	0.5 U	0.5 U	0.5 U	0.5 U	0.091 J	0.5 U	0.5 U	0.07 J	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.14 J	0.13 J	0.14 J
Vinyl Chloride	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	2.0 U	2.0 U	2.0 U	2 U	2 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	0.18 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-28	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29
Sample Date	1/27/2022	2/22/2022	3/24/2022	4/26/2022	5/25/2022	6/21/2022	7/28/2022	8/25/2022	9/23/2022	10/27/2022	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023	4/27/2023	5/23/2023	6/21/2023	7/27/2023	8/24/2023	9/23/2019	10/24/2019	11/21/2019	12/18/2019	1/23/2020	2/24/2020	3/25/2020
Parameter																											
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 UJ	1.0 U	1.0 U	1 U	1 U	1 UJ
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
2-Butanone	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	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 U
2-Hexanone	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	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 U
4-Methyl-2-Pentanone	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	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ
Acetone	2.1 J	1.8 J	1.8 J	1.8 J	2.9 J	5 U	3 J	5 U	2.1 J	5 U	5 U	5 U	1.5 J	1.7 J	5 U	5 U	5 U	4 J	5 U	5 U	5 U	5.0 U	5.0 U	5.0 UJ	5 U	5 UJ	5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	0.11 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Chloroform	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.099 J	0.093 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.091 J	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 J	0.12 J	0.15 J	0.1 J	0.5 U	0.11 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	0.11 J	0.1 J	0.11 J	0.098 J	0.089 J	0.1 J	0.14 J	0.5 U	0.5 U	0.17 J	0.18 J	0.15 J	0.14 J	0.17 J	0.17 J	0.16 J	0.2 J	0.28 J	0.19 J	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Tetrachloroethene	0.24 J	0.23 J	0.2 J	0.2 J	0.2 J	0.24 J	0.5 U	0.5 U	0.24 J	0.26 J	0.22 J	0.24 J	0.5 U	0.21 J	0.24 J	0.21 J	0.5 U	0.5 U	0.22 J	0.24 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Toluene	0.15 J	0.094 J	0.12 J	0.095 J	0.087 J	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 J	0.5 U	0.1 J	0.095 J	0.11 J	0.1 J	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Trichloroethene	0.16 J	0.13 J	0.13 J	0.11 J	0.088 J	0.11 J	0.15 J	0.5 U	0.084 J	0.17 J	0.17 J	0.15 J	0.14 J	0.2 J	0.21 J	0.11 J	0.16 J	0.22 J	0.14 J	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	2.0 U	2.0 U	2.0 U	2 U	2 U	2 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29
Sample Date	**4/28/2020**	**5/26/2020**	**6/24/2020**	**7/28/2020**	**8/25/2020**	**9/25/2020**	**10/29/2020**	**11/30/2020**	**12/23/2020**	**1/26/2021**	**2/25/2021**	**3/24/2021**	**4/26/2021**	**5/25/2021**	**6/24/2021**	**7/29/2021**	**8/26/2021**	**9/24/2021**	**10/20/2021**	**11/23/2021**	**12/17/2021**	**1/27/2022**	**2/22/2022**	**3/24/2022**	**4/26/2022**	**5/25/2022**	**6/21/2022**
Parameter																											
Volatile Organic Compound																											
1,1,1,2-Tetrachloroethane	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 UJ	5 U	5 U	5 U	5 U	0.93 J	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	5 U	1.6 J	3.2 U	1.6 U	2.1 U	5 U	1.7 J	3.7 J	1.8 J	1.9 J	1.7 J	5 U	5 U	1.6 J	1.4 J	2.8 J	1.5 J	1.4 J	1.4 J	1.2 J	1 J	1.5 J	1.7 J	1.9 J	1.5 J	2 J	5 U
Benzene	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	1 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	0.074 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 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	1 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	1 UJ	0.5 U	0.5 U	0.06 J	0.36 J	0.12 J	0.063 J	0.5 U	0.5 UJ	0.5 U	0.5 U	0.072 J	0.5 U	0.068 J	0.5 U	0.5 U	0.5 U	0.5 U	0.063 J	0.06 J	0.094 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	1 U	0.067 J	0.076 J	0.08 J	0.097 J	0.11 J	0.1 J	0.5 U	0.076 J	0.084 J	0.5 U	0.083 J	0.076 J	0.11 J	0.13 J	0.13 J	0.21 J	0.057 J	0.18 J	0.15 J	0.16 J	0.13 J	0.12 J	0.1 J	0.089 J	0.072 J	0.12 J
cis-1,3-Dichloropropene	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	1 U	0.5 U	0.5 U	0.5 U	0.095 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	1 U	0.5 U	0.5 U	0.5 U	0.074 J	0.5 U	0.065 J	0.5 U	0.5 U	0.061 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.064 J	0.12 J	0.08 J	0.43 J	0.33 J	0.32 J	0.39 J	0.27 J	0.25 J	0.28 J	0.26 J	0.36 J
Toluene	1 U	0.11 J	0.096 J	0.5 U	0.5 U	0.5 U	0.5 U	0.13 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.078 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.074 J	0.098 J	0.071 J	0.5 U
trans-1,2-Dichloroethene	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	1 U	0.5 U	0.065 J	0.5 U	0.12 J	0.11 J	0.092 J	0.5 U	0.075 J	0.5 U	0.5 U	0.1 J	0.075 J	0.1 J	0.11 J	0.11 J	0.2 J	0.5 U	0.29 J	0.19 J	0.2 J	0.19 J	0.14 J	0.12 J	0.11 J	0.082 J	0.12 J
Vinyl Chloride	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-29	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6
Sample Date	7/28/2022	8/25/2022	9/23/2022	10/27/2022	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023	4/27/2023	5/23/2023	6/21/2023	7/27/2023	8/24/2023	9/23/2019	10/24/2019	11/21/2019	12/18/2019	1/23/2020	2/24/2020	3/25/2020	4/28/2020	5/26/2020	6/24/2020	7/28/2020	8/25/2020	9/25/2020	10/29/2020
Parameter																												
Volatile Organic Compound																												
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	1.7 J	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	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	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	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U
4-Methyl-2-Pentanone	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	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U
Acetone	5.1	5 U	1.2 J	5 U	5 U	5 U	5 U	2.3 J	5 U	5 U	5 U	2.8 J	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	3.9 UJ	1.4 J	2.3 U	2.4 U	1.3 U	5 U	5.6 J
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.089 J	1 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 UJ	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U	0.5 UJ	0.11 J	0.5 U	0.19 J	0.5 U	0.13 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.14 J	0.24 J	0.1 J	0.5 U
cis-1,2-Dichloroethene	0.13 J	0.14 J	0.12 J	0.18 J	0.17 J	0.5 U	0.15 J	0.27 J	0.23 J	0.5 U	0.22 J	0.29 J	0.19 J	0.18 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.057 J	0.5 U	0.067 J	0.5 U	0.099 J	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.33 J	0.41 J	0.44 J	0.49 J	0.48 J	0.28 J	0.27 J	0.33 J	0.41 J	0.2 J	0.37 J	0.33 J	0.39 J	0.65	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.08 J	0.5 U	0.11 J	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.1 J	0.15 J	0.13 J	0.19 J	0.17 J	0.14 J	0.15 J	0.31 J	0.26 J	0.5 U	0.2 J	0.24 J	0.15 J	0.17 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.065 J	0.063 J	0.098 J	0.5 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	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	2.0 U	2.0 U	2.0 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6
Sample Date	11/30/2020	12/23/2020	1/26/2021	2/25/2021	3/24/2021	4/26/2021	5/25/2021	6/24/2021	7/29/2021	8/26/2021	9/24/2021	10/20/2021	11/23/2021	12/17/2021	1/27/2022	2/22/2022	3/24/2022	4/26/2022	5/25/2022	6/21/2022	7/28/2022	8/25/2022	9/23/2022	10/27/2022	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023	4/27/2023
Parameter																															
Volatile Organic Compound																															
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	5 U	5 U	5 U	5 UJ	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	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	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	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	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
Acetone	3 J	1.8 J	2.4 J	1.5 J	5 U	5 U	1.3 J	1.9 J	1.8 J	1.5 J	1.1 J	1.4 J	1 J	1.2 J	5 U	1.3 J	1.7 J	1.3 J	2.4 J	5 U	3.2 J	1.3 J	1 J	5 U	5 U	5 U	5 U	1.3 J	5 U	5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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 Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.066 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.18 J	0.5 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.059 J	0.5 U	0.088 J	0.11 J	0.14 J	0.5 U	0.095 J	0.11 J	0.093 J	0.072 J	0.062 J	0.07 J	0.5 U	0.058 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.088 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.083 J	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.087 J	0.5 U	0.072 J	0.12 J	0.5 U	0.15 J	0.12 J	0.11 J	0.11 J	0.064 J	0.088 J	0.5 U	0.5 U	0.5 U	0.081 J	0.5 U	0.5 U	0.5 U	0.5 U	0.097 J	0.5 U	0.5 U	0.091 J	0.5 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7
Sample Date	5/23/2023	6/21/2023	7/27/2023	8/24/2023	9/23/2019	10/24/2019	11/21/2019	12/18/2019	1/23/2020	2/24/2020	3/25/2020	4/28/2020	5/26/2020	6/24/2020	7/28/2020	8/25/2020	9/25/2020	10/29/2020	11/30/2020	12/23/2020	1/26/2021	2/25/2021	3/24/2021	4/26/2021	5/25/2021	6/24/2021	7/29/2021	8/26/2021	9/24/2021	10/20/2021
Parameter																														
Volatile Organic Compound																														
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 UJ	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	5 U	1.7 J	5 U	5 U	5 U	5.0 U	5.0 U	5.0 UJ	5 U	5 UJ	5 UJ	3.8 UJ	1.6 J	2 U	1.8 U	1.7 U	5 U	4.7 J	2.9 J	2.3 J	3 J	1.5 J	5 U	5 U	1.8 J	2.4 J	1.8 J	1.7 J	1.6 J	1.9 J
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.068 J	1 U	1 U	1 U	0.12 J	1 U	1 U	1 U	1 U	1 U	1 U	0.075 J	1 U	1 U	1 U	1 U	1 U	0.099 J
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.11 J	0.098 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.12 J	0.17 J	0.5 U	0.096 J
Chloromethane	0.19 J	0.2 J	0.15 J	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.063 J	0.29 J	0.12 J	0.5 U	0.094 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.061 J	0.5 U	0.5 U	0.5 U	0.5 U	0.072 J
cis-1,2-Dichloroethene	0.17 J	0.17 J	0.13 J	0.14 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.084 J	0.08 J	0.097 J	0.5 U	0.078 J	0.067 J	0.063 J	0.5 U	0.5 U	0.069 J	0.065 J	0.085 J	0.11 J	0.19 J	0.19 J	0.071 J	0.16 J
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.089 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.065 J	0.5 U	0.5 U	0.5 U	0.074 J	0.066 J	0.5 U	0.5 U	0.075 J	0.085 J	0.076 J	0.085 J	0.17 J	0.5 U	0.1 J
Toluene	0.097 J	0.083 J	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.083 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.084 J	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.12 J	0.12 J	0.094 J	0.12 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.098 J	0.5 U	0.081 J	0.1 J	0.15 J	0.1 J	0.082 J	0.5 U	0.5 U	0.5 U	0.096 J	0.089 J	0.082 J	0.094 J	0.13 J	0.19 J	0.13 J	0.22 J
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	2 U	2.0 U	2.0 U	2.0 U	2 U	2 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	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8
Sample Date	11/23/2021	12/17/2021	1/27/2022	2/22/2022	3/24/2022	4/26/2022	5/25/2022	6/21/2022	7/28/2022	8/25/2022	9/23/2022	10/27/2022	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023	4/27/2023	5/23/2023	6/21/2023	7/27/2023	8/24/2023	9/23/2019	10/24/2019	11/21/2019	12/18/2019	1/23/2020	2/24/2020	3/25/2020	4/28/2020
Parameter																														
Volatile Organic Compound																														
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 UJ	1.0 U	1.0 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ
2-Butanone	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	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ
2-Hexanone	5 U	5 U	5 UJ	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	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ
4-Methyl-2-Pentanone	5 U	5 U	5 UJ	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	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ
Acetone	1.2 J	2.4 J	5 U	1.6 J	1.6 J	1.3 J	2.6 J	5 U	3.1 J	1.7 J	1.2 J	5 U	5 U	5 U	5 U	1.8 J	5 U	5 U	5 U	2.8 J	5 U	5 U	5 U	5.0 U	5.0 U	5.0 UJ	5 U	5 UJ	5 U	5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ
Carbon Disulfide	0.062 J	0.063 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 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Chloroform	0.094 J	0.091 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.092 J	0.15 J	0.1 J	0.5 U	0.093 J	0.11 J	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U	0.11 J	0.092 J	0.097 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.2 J	0.1 J	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ
cis-1,2-Dichloroethene	0.12 J	0.5 U	0.094 J	0.083 J	0.1 J	0.073 J	0.062 J	0.085 J	0.13 J	0.15 J	0.087 J	0.18 J	0.18 J	0.099 J	0.14 J	0.16 J	0.19 J	0.14 J	0.25 J	0.68	0.18 J	0.2 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Tetrachloroethene	0.076 J	0.091 J	0.062 J	0.061 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.078 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.083 J	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Trichloroethene	0.15 J	0.19 J	0.16 J	0.12 J	0.13 J	0.082 J	0.5 U	0.085 J	0.14 J	0.16 J	0.1 J	0.2 J	0.2 J	0.14 J	0.16 J	0.21 J	0.24 J	0.12 J	0.21 J	0.35 J	0.16 J	0.19 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	2.0 U	2.0 U	2.0 U	2 U	2 U	2 U	2 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8
Sample Date	5/26/2020	6/24/2020	7/28/2020	8/25/2020	9/25/2020	10/29/2020	11/30/2020	12/23/2020	1/26/2021	2/25/2021	3/24/2021	4/26/2021	5/25/2021	6/24/2021	7/29/2021	8/26/2021	9/24/2021	10/20/2021	11/23/2021	12/17/2021	1/27/2022	2/22/2022	3/24/2022	4/26/2022	5/25/2022	6/21/2022	7/28/2022	8/25/2022	9/23/2022	10/27/2022
Parameter																														
Volatile Organic Compound																														
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	5 U	5 U	5 U	1.3 J	5 U	5 U	5 U	5 U	5 U	5 UJ	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	1.6 J	5 U	5 U	5 U
2-Hexanone	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	2 J	1.7 U	1.8 U	1 U	5 U	3 J	2.7 J	1.6 J	1.6 J	1.4 J	5 U	5 U	1.4 J	2.2 J	2.2 J	1.6 J	1.2 J	1.5 J	1 J	1.6 J	0.94 U	1.9 J	1.8 J	1.1 J	2.2 J	5 U	3.5 J	2.1 J	1.3 J	5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	0.06 J	1 U	1 U	1 U	0.081 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	0.12 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
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	0.5 U	0.5 U	0.071 J	1.1	0.11 J	0.5 U	0.072 J	0.5 U	0.5 U	0.5 U	0.062 J	0.5 U	0.5 U	0.5 U	0.5 U	0.061 J	0.5 U	0.078 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.5 U	0.077 J	0.076 J	0.12 J	0.11 J	0.086 J	0.5 U	0.5 U	0.092 J	0.5 U	0.088 J	0.069 J	0.11 J	0.12 J	0.13 J	0.24 J	0.068 J	0.2 J	0.17 J	0.16 J	0.12 J	0.12 J	0.11 J	0.094 J	0.088 J	0.12 J	0.14 J	0.15 J	0.14 J	0.19 J
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.072 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.064 J	0.5 U	0.5 U	0.5 U	0.5 U	0.062 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.099 J	0.11 J	0.58	0.49 J	0.5	0.52	0.43 J	0.41 J	0.35 J	0.39 J	0.34 J	0.32 J	0.33 J	0.51	0.7
Toluene	0.078 J	0.093 J	0.5 U	0.5 U	0.5 U	0.5 U	0.079 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 J	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.5 U	0.075 J	0.068 J	0.12 J	0.11 J	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.097 J	0.075 J	0.095 J	0.5 U	0.099 J	0.2 J	0.5 U	0.3 J	0.22 J	0.19 J	0.18 J	0.13 J	0.12 J	0.099 J	0.093 J	0.12 J	0.13 J	0.14 J	0.12 J	0.2 J
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9
Sample Date	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023	4/27/2023	5/23/2023	6/21/2023	7/27/2023	8/24/2023	9/23/2019	10/24/2019	11/21/2019	12/18/2019	1/23/2020	2/24/2020	3/25/2020	4/28/2020	5/26/2020	6/24/2020	7/28/2020	8/25/2020	9/25/2020	10/29/2020	11/30/2020	12/23/2020	1/26/2021	2/25/2021	3/24/2021	4/26/2021
Parameter																														
Volatile Organic Compound																														
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 UJ	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	0.96 J	0.79 J	5 U	5 U	5 U	5 U	0.6 UJ	5 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U
Acetone	5 U	5 U	1.6 J	1.8 J	5 U	5 U	5 U	2.4 J	5 U	5 U	5 U	5.0 U	5.0 U	5.0 UJ	5 U	5 UJ	5 UJ	4.9 UJ	3.1 J	5 U	3 U	3.4 U	5 U	4.9 J	3.2 J	2.8 J	2.7 J	1.9 J	5 U	5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.091 J	1 U	1 U	1 U	1 U	0.064 J	1 U	1 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.098 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.14 J	0.12 J	0.3 J	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.53	0.091 J	0.5 U	0.063 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.17 J	0.13 J	0.16 J	0.2 J	0.26 J	0.089 J	0.22 J	0.51	0.2 J	0.21 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.059 J	0.5 U	0.5 U	0.5 U	0.061 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.66	0.39 J	0.46 J	0.52	0.66	0.32 J	0.4 J	0.55	0.53	0.67	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.094 J	0.088 J	0.076 J	0.076 J	0.084 J	0.088 J	0.5 U	0.11 J	0.082 J	0.076 J	0.078 J	0.09 J
Toluene	0.5 U	0.5 U	0.5 U	0.15 J	0.5 U	0.5 U	0.085 J	0.5 U	0.099 J	0.5 U	1 U	1.0 U	0.90 J	1.0 U	1 U	1 U	1 U	1 U	0.29 J	0.35 J	0.088 J	0.14 J	0.078 J	0.39 J	0.89	0.079 J	0.5 U	0.5 U	0.5 U	0.088 J
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.18 J	0.15 J	0.16 J	0.28 J	0.29 J	0.08 J	0.2 J	0.28 J	0.16 J	0.17 J	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	0.073 J	0.5 U	0.5 U	0.074 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.063 J
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2.0 U	2.0 U	2.0 U	2 U	2 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

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-6
Surface Water Analytical Data Summary - Volatile Organic Compounds
Former York Naval Ordnance Plant - York, PA

Location/Identification	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9
Sample Date	5/25/2021	6/24/2021	7/29/2021	8/26/2021	9/24/2021	10/20/2021	11/23/2021	12/17/2021	1/27/2022	2/22/2022	3/24/2022	4/26/2022	5/25/2022	6/21/2022	7/28/2022	8/25/2022	9/23/2022	10/27/2022	11/18/2022	12/21/2022	1/25/2023	2/21/2023	3/22/2023	4/27/2023	5/23/2023	6/21/2023	7/27/2023	8/24/2023
Parameter																												
Volatile Organic Compound																												
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5 U	2.3 J	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	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	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	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	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	5 U	5 U
Acetone	3.4 J	6.3	4.4 J	2.4 J	3.2 J	2.3 J	1.6 J	2.6 J	1.8 J	1.7 J	2.2 J	2.2 J	3.5 J	5 U	2.9 J	3.3 J	2.3 J	5 U	5 U	5 U	1.2 J	1.8 J	5 U	5 U	5 U	3.7 J	5 U	5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Disulfide	1 U	0.064 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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.11 J	0.1 J	0.12 J	0.22 J	0.12 J	0.14 J	0.1 J	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.096 J	0.098 J	0.5 U	0.5 U	0.095 J	0.5 U	0.5 U	0.092 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.14 J	0.17 J	0.22 J	0.11 J	0.5 U
cis-1,2-Dichloroethene	0.5 U	0.11 J	0.078 J	0.072 J	0.08 J	0.079 J	0.11 J	0.11 J	0.093 J	0.11 J	0.11 J	0.1 J	0.091 J	0.085 J	0.11 J	0.084 J	0.083 J	0.15 J	0.14 J	0.12 J	0.14 J	0.17 J	0.18 J	0.11 J	0.16 J	0.35 J	0.16 J	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.088 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.073 J	0.085 J	0.081 J	0.094 J	0.09 J	0.18 J	0.19 J	0.23 J	0.2 J	0.21 J	0.22 J	0.23 J	0.21 J	0.21 J	0.5 U	0.5 U	0.21 J	0.28 J	0.23 J	0.5 U	0.5 U	0.22 J	0.3 J	0.2 J	0.5 U	0.5 U	0.28 J	0.27 J
Toluene	0.12 J	0.15 J	0.5 U	0.5 U	0.29 J	0.5 U	0.5 U	0.5 U	0.09 J	0.082 J	0.097 J	0.1 J	0.086 J	0.5 U	0.091 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.11 J	0.095 J	0.14 J	0.081 J	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.5 U	0.5 U	0.5 U	0.072 J	0.11 J	0.11 J	0.13 J	0.13 J	0.13 J	0.11 J	0.12 J	0.11 J	0.096 J	0.093 J	0.11 J	0.1 J	0.086 J	0.5 U	0.14 J	0.13 J	0.13 J	0.19 J	0.19 J	0.1 J	0.14 J	0.15 J	0.14 J	0.13 J
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (Total)	0.2 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 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
Results are reported in micrograms per liter (µg/L)
U - Not Detected. Results are shown as the laboratory Reporting Limit (RL)
J - Estimated. Concentration Between RL and Method Detection Limit (MDL)

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-26	09/23/19	1U	**5.1**	1U	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/24/19	1U	**4.2**	1U	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/21/19	1U	**4.7**	1U	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/18/19	1U	**1.0**	1U	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/23/20	1U	**4.0**	1U	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/24/20	1U	**0.55J**	1U	1UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/25/20	1U	1U	1U	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/28/20	1U	**1.6**	1U	1UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/26/20	0.5U	**3.1**	**0.072J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/24/20	0.5U	**1.5**	**0.077J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/28/20	**0.19J**	**3.6**	**0.091J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/25/20	**0.19J**	**3.9**	**0.075J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	09/25/20	**0.20J**	**3.7**	**0.083J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/29/20	0.5U	0.5U	**0.064J**	0.5UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/30/20	**0.063J**	0.5U	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/23/20	0.5U	**0.72**	**0.06J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/26/21	**0.13J**	**2.0**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/25/21	0.5U	**0.42J**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/24/21	**0.14J**	**2.1**	**0.069J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/26/21	**0.18J**	**4.5**	**0.067J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/25/21	**0.17J**	**4.0**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/24/21	**0.16J**	**3.2**	**0.08J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/29/21	**0.12J**	**1.3**	**0.12J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/26/21	**0.17J**	**3.4**	**0.10J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	09/24/21	**0.12J**	**0.74**	**0.065J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/21	**0.18J**	**3.7**	**0.063J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/23/21	**0.20J**	**4.1**	**0.093J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/17/21	**0.20J**	**3.4**	**0.073J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/27/22	**0.14J**	**3.3**	**0.053J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/22/22	**0.15J**	**2.9**	**0.065J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/24/22	**0.14J**	**2.3**	**0.074J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/26/22	**0.14J**	**2.9**	**0.055J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/25/22	**0.093J**	**1.4**	**0.061J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/21/22	**0.16J**	**4.2**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/28/22	**0.17J**	**4.2**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/25/22	**0.18J**	**3.8**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	09/23/22	**0.15J**	**4.0**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/27/22	**0.16J**	**3.1**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/18/22	**0.17J**	**3.8**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/21/22	**0.18J**	**2.9**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/25/23	**0.15J**	**1.1**	**0.12J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/21/23	**0.18J**	**4.1**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/22/23	**0.17J**	**4.2**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/27/23	**0.11J**	**0.99**	**0.10J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/23/23	**0.18J**	**0.26J**	**0.21J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/21/23	**0.18J**	**3.8**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/27/23	**0.16J**	**3.1**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/24/23	**0.16J**	**3.8**	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-6	09/23/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	10/24/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	11/21/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	12/18/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	01/23/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	02/24/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	03/25/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	04/28/20	1U	1U	1U	1UJ	X	X	X	X	X	X	X	X	X	X	X	X
	05/26/20	0.5U	0.5U	**0.057J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/24/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/28/20	**0.065J**	0.5U	**0.067J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/25/20	**0.063J**	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	09/25/20	**0.098J**	0.5U	**0.099J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	10/29/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	11/30/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	12/23/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	01/26/21	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	02/25/21	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	03/24/21	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	04/26/21	0.5U	0.5U	**0.059J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	05/25/21	**0.087J**	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/24/21	0.5U	0.5U	**0.088J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/29/21	**0.072J**	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/26/21	**0.12J**	0.5U	**0.14J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	09/24/21	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	10/20/21	**0.15J**	0.5U	**0.095J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	11/23/21	**0.12J**	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	12/17/21	**0.11J**	0.5U	**0.093J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	01/27/22	**0.11J**	0.5U	**0.072J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	02/22/22	**0.064J**	0.5U	**0.062J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	03/24/22	**0.088J**	0.5U	**0.070J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	04/26/22	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	05/25/22	0.5U	0.5U	**0.058J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/21/22	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/28/22	**0.081J**	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/25/22	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	09/23/22	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	10/27/22	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	11/18/22	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	12/21/22	**0.097J**	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	01/25/23	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	02/21/23	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	03/22/23	**0.091J**	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	04/27/23	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	05/23/23	**0.12J**	0.5U	**0.17J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/21/23	**0.12J**	0.5U	**0.17J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/27/23	**0.094J**	0.5U	**0.13J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/24/23	**0.12J**	0.5U	**0.14J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-7	09/23/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	10/24/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	11/21/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	12/18/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	01/23/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	02/24/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	03/25/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	04/28/20	1U	1U	1U	1UJ	X	X	X	X	X	X	X	X	X	X	X	X
	05/26/20	**0.098J**	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/24/20	0.5U	0.5U	**0.084J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/28/20	**0.081J**	0.5U	**0.080J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/25/20	**0.10J**	**0.065J**	**0.097J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	09/25/20	**0.15J**	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	10/29/20	**0.10J**	0.5U	**0.078J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	11/30/20	**0.082J**	0.5U	**0.067J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	12/23/20	0.5U	**0.074J**	**0.063J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	01/26/21	0.5U	**0.066J**	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	02/25/21	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	03/24/21	**0.096J**	0.5U	**0.069J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	04/26/21	**0.089J**	**0.075J**	**0.065J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	05/25/21	**0.082J**	**0.085J**	**0.085J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/24/21	**0.094J**	**0.076J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/29/21	**0.13J**	**0.085J**	**0.19J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/26/21	**0.19J**	**0.17J**	**0.19J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	09/24/21	**0.13J**	0.5U	**0.071J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	10/20/21	**0.22J**	**0.10J**	**0.16J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	11/23/21	**0.15J**	**0.076J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	12/17/21	**0.19J**	**0.091J**	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	01/27/22	**0.16J**	**0.062J**	**0.094J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	02/22/22	**0.12J**	**0.061J**	**0.083J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	03/24/22	**0.13J**	0.5U	**0.10J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	04/26/22	**0.082J**	0.5U	**0.073J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	05/25/22	0.5U	0.5U	**0.062J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/21/22	**0.085J**	0.5U	**0.085J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/28/22	**0.14J**	0.5U	**0.13J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/25/22	**0.16J**	0.5U	**0.15J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	09/23/22	**0.10J**	0.5U	**0.087J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	10/27/22	**0.20J**	0.5U	**0.18J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	11/18/22	**0.20J**	0.5U	**0.18J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	12/21/22	**0.14J**	0.5U	**0.099J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	01/25/23	**0.16J**	0.5U	**0.14J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	02/21/23	**0.21J**	0.5U	**0.16J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	03/22/23	**0.24J**	0.5U	**0.19J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	04/27/23	**0.12J**	0.5U	**0.14J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	05/23/23	**0.21J**	0.5U	**0.25J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/21/23	**0.35J**	0.5U	**0.68**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/27/23	**0.16J**	0.5U	**0.18J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/24/23	**0.19J**	0.5U	**0.20J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) [1]				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-17	10/9/2019 [2]	**1.2**	**3.0**	**0.99J**	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/24/19	**1.6**	**3.1**	**1.3**	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/21/19	**1.5**	**3.8**	**1.0**	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/18/19	1U	**2.0**	1U	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/23/20	**1.2**	**3.1**	**0.99 J**	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/24/20	**2.5**	**6.6 J**	**1.8**	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/25/20	1U	1U	1U	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/28/20	1U	**1.2**	1U	1UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/26/20	**0.68**	**1.3**	**0.52**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/24/20	**2.0**	**3.4**	**1.8**	**0.25J**	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/28/20	**1.4**	**3.0**	**1.1**	**0.11J**	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/25/20	**2.8**	**7.1**	**1.6**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	09/25/20	**1.0**	**2.3**	**0.78**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/29/20	**0.28J**	**0.44J**	**0.14J**	0.5UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/30/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/23/20	**0.86**	**2.3**	**0.65**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/26/21	**1.2**	**3.3**	**0.81**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/25/21	0.5U	0.5U	**0.051J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/24/21	**0.88**	**2.1**	**0.57**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/26/21	**1.0**	**2.4**	**0.80**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/25/21	**0.35J**	**0.54J**	**0.36J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/24/21	**1.1**	**3.5**	**0.81**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/29/21	**0.2J**	**0.23J**	**0.2J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/26/21	**3.4**	**8.4**	**1.7**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	09/24/21	**2.5**	**9.0**	**0.97**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/21	**11.0**	**51.0**	**3.9**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/23/21	**9.4**	**61.0**	**4.7**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/17/21	**4.2J**	**31.0**	**2.4J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/27/22	**6.3**	**80.0**	**4.7**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/22/22	**5.4**	**84.0**	**4.4**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/24/22	**5.0**	**88.0**	**4.2**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/26/22	**4.8**	**77.0**	**3.9**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/25/22	**2.4**	**28.0**	**3.4**	**0.18J**	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/21/22	**6.1**	**76.0**	**4.3**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/28/22	**3.2**	**34.0**	**3.8**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/25/22	**6.1**	**78.0**	**4.3**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	09/23/22	**4.6**	**66.0**	**2.9**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/27/22	**3.7**	**71.0**	**3.0**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/18/22	**4.3**	**65.0**	**3.4**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/21/22	**4.4**	**69.0**	**3.5**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/25/23	**3.6**	**60.0**	**3.1**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/21/23	**4.3**	**84.0**	**3.4**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/22/23	**4.0**	**49.0**	**4.7**	**0.11J**	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/27/23	**2.3**	**44.0**	**2.1**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/23/23	**1.7**	**35.0**	**2.2**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/21/23	**2.3**	**46.0**	**2.9**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/27/23	**6.7**	**140.0**	**5.7**	**0.11J**	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/24/23	**4.7**	**90.0**	**2.5**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) [1]				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-16	09/23/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/24/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/21/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/18/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/23/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/24/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/25/20	1U	1U	1U	1UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/28/20	1U	1U	1U	1UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/26/20	**0.16J**	**0.075J**	**0.090J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/20	**0.078J**	0.5U	**0.082J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/20	**0.078J**	0.5U	**0.087J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/20	**0.13J**	**0.072J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/25/20	**0.11J**	**0.068J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/29/20	**0.087J**	0.5U	0.5U	0.5UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/30/20	0.5U	0.5U	**0.5U**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/23/20	0.5U	0.5U	**0.068J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/26/21	**0.1J**	0.5U	**0.092J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/25/21	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/21	**0.09J**	0.5U	**0.082J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/21	**0.081J**	**0.065J**	**0.076J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/21	**0.087J**	**0.062J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/21	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/29/21	**0.11J**	**0.062J**	**0.18J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/26/21	**0.19J**	**0.12J**	**0.23J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/24/21	0.5U	**0.15J**	**0.078J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/20/21	**0.35J**	**0.97**	**0.19J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/23/21	**0.24J**	**0.93**	**0.18J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/17/21	**0.18J**	**0.71**	**0.15J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/27/22	**0.20J**	**0.99**	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/22/22	**0.14J**	**0.74**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/22	**0.14J**	**0.88**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/22	**0.11J**	**0.76**	**0.097J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/22	**0.081J**	**0.52**	**0.086J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/22	**0.14J**	**0.76**	**0.13J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/22	**0.18J**	**1.6**	**0.18J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/22	**0.17J**	**0.57**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/23/22	**0.14J**	**1.4**	**0.15J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/27/22	**0.22J**	**1.8**	**0.22J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/18/22	**0.21J**	**1.5**	**0.21J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/21/22	**0.16J**	**0.71**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/25/23	**0.17J**	**0.87**	**0.15J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/21/23	**0.29J**	**0.67**	**0.25J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/22/23	**0.26J**	**0.61**	**0.25J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/27/23	**0.096J**	**0.83**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/23/23	**0.21J**	**0.68**	**0.24J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/23	**0.32J**	**1.2**	**0.48J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/27/23	**0.17J**	**1.4**	**0.23J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/24/23	**0.18J**	**1.1**	**0.21J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-27	09/23/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/24/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/21/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/18/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/23/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/24/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/25/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/28/20	1U	1U	1U	1UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/26/20	0.5U	**0.079J**	**0.079J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/20	**0.097J**	**0.12J**	**0.087J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/20	0.5U	0.5U	**0.069J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/20	**0.089J**	0.5U	**0.090J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/25/20	**0.11J**	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/29/20	**0.094J**	**0.061J**	**0.068J**	0.5UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/30/20	**0.072J**	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/23/20	0.5U	**0.068J**	**0.062J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/26/21	**0.15J**	**0.13J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/25/21	0.5U	**0.063J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/21	**0.096J**	0.5U	**0.079J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/21	**0.072J**	**0.064J**	**0.066J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/21	**0.084J**	**0.079J**	**0.094J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/21	0.5U	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/29/21	**0.24J**	**0.29J**	**0.20J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/26/21	**0.17J**	**0.14J**	**0.19J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/24/21	0.5U	0.5U	**0.07J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/20/21	**0.18J**	**0.094J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/23/21	**0.15J**	**0.098J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/17/21	**0.17J**	**0.074J**	**0.13J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/27/22	**0.14J**	**0.070J**	**0.082J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/22/22	**0.12J**	**0.090J**	**0.10J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/22	**0.14J**	**0.082J**	**0.10J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/22	**0.089J**	0.5U	**0.072J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/22	**0.080J**	**0.082J**	**0.081J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/22	**0.10J**	0.5U	**0.090J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/22	**0.14J**	0.5U	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/22	**0.13J**	0.5U	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/23/22	**0.084J**	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/27/22	**0.24J**	**0.56**	**0.23J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/18/22	**0.20J**	**0.20J**	**0.20J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/21/22	**0.14J**	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/25/23	**0.15J**	0.5U	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/21/23	**0.25J**	0.5U	**0.21J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/22/23	**0.27J**	**0.32J**	**0.24J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/27/23	**0.10J**	0.5U	**0.13J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/23/23	**0.18J**	0.5U	**0.24J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/23	**0.35J**	**0.58**	**0.39J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/27/23	**0.14J**	0.5U	**0.18J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/24/23	**0.15J**	**0.26J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-15	09/23/19	**0.96J**	**2.9**	**0.79J**	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/24/19	**1.3**	**2.6**	**0.97J**	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/21/19	**0.99J**	**2.7**	**0.86J**	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/18/19	**0.86J**	**3.0**	**0.83J**	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/23/20	**0.86J**	**2.4**	**0.87J**	1UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/24/20	**1.4**	**3.1**	**1.4**	1U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/25/20	1U	**2.2**	1U	1UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/28/20	**1.5**	**2.8**	**1.2**	1UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/26/20	**1.0**	**3.1**	**0.83**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/24/20	**0.89**	**2.5**	**0.77**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/28/20	**0.89**	**2.5**	**0.75**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/25/20	**1.1**	**3.0**	**0.85**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	09/25/20	**0.86**	**2.2**	**0.70**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/29/20	**0.79**	**2.0**	**0.66**	0.5UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/30/20	**0.29J**	**0.64**	**0.23J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/23/20	**0.97**	**2.8**	**0.84**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/26/21	**0.78**	**2.1**	**0.66**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/25/21	**0.53**	**1.5**	**0.43J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/24/21	**0.98**	**2.9**	**0.78**	0.5UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/26/21	**0.86**	**2.4**	**0.69**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/25/21	**0.75**	**2.2**	**0.63**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/24/21	**0.80**	**2.2**	**0.66**	0.5UJ	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/29/21	**0.83**	**2.2**	**0.67**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/26/21	**1.1**	**3.3J**	**0.89**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	09/24/21	**0.95**	**2.9**	**0.85**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/21	**1.0**	**3.6**	**0.88**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/23/21	**1.1**	**4.8**	**0.93**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/17/21	**1.0**	**4.7**	**0.86**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/27/22	**1.4**	**6.1**	**1.5**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/22/22	**1.7**	**6.4**	**1.9**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/24/22	**1.7**	**6.5**	**1.7**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/26/22	**1.7**	**6.0**	**1.8**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/25/22	**1.9**	**6.5**	**2.1**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/21/22	**1.6**	**5.7**	**1.3**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/28/22	**1.4**	**5.0**	**1.4**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/25/22	**1.4**	**4.8**	**1.4**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	09/23/22	**1.2**	**5.5**	**1.3**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/27/22	**1.6**	**5.5**	**2.3**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/18/22	**1.8**	**5.8**	**2.2**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/21/22	**1.9**	**6.4**	**2.4**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	01/25/23	**1.8**	**5.5**	**2.3**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	02/21/23	**2.1**	**7.0**	**2.3J**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	03/22/23	**1.3**	**6.3**	**1.4**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	04/27/23	**1.1**	**4.6**	**1.2**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	05/23/23	**0.94**	**4.3**	**0.94**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	06/21/23	**1.1**	**3.9**	**1.1**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	07/27/23	**1.7**	**6.0**	**1.9**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	08/24/23	**0.97**	**4.2**	**0.76**	0.5U	X	X	X	X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-13	09/23/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/24/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/21/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/18/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/23/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/24/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/25/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/28/20	1U	1U	1U	1UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/26/20	0.5U	0.5U	**0.08J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/20	**0.074J**	0.5U	**0.083J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/20	**0.073J**	0.5U	**0.086J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/20	**0.13J**	**0.064J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/25/20	**0.13J**	0.5U	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/29/20	0.5U	**0.074J**	**0.051J**	0.5UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/30/20	0.5U	0.5U	**0.056J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/23/20	**0.069J**	0.5U	**0.078J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/26/21	0.5U	**0.064J**	**0.092J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/25/21	0.5U	0.5U	**0.051J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/21	**0.097J**	**0.06J**	**0.085J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/21	**0.071J**	0.5U	**0.075J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/21	**0.092J**	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/21	**0.10J**	0.5U	**0.13J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/29/21	**0.12J**	0.5U	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/26/21	**0.22J**	**0.14J**	**0.24J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/24/21	**0.16J**	**0.15J**	**0.088J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/20/21	**0.33J**	**0.67**	**0.20J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/23/21	**0.20J**	**0.56**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/17/21	**0.19J**	**0.65**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/27/22	**0.20J**	**0.67**	**0.13J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/22/22	**0.13J**	**0.50**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/22	**0.13J**	**0.42J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/22	**0.10J**	**0.46J**	**0.087J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/22	**0.086J**	**0.54**	**0.087J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/22	**0.15J**	**0.76**	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/22	**0.14J**	**0.95**	**0.16J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/22	**0.17J**	**0.56**	**0.23J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/23/22	**0.13J**	**0.92**	**0.13J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/27/22	**0.23J**	**1.20**	**0.21J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/18/22	**0.19J**	**0.98**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/21/22	**0.15J**	**0.47J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/25/23	**0.16J**	**0.55**	**0.15J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/21/23	**0.26J**	**0.66**	**0.23J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/22/23	**0.29J**	**0.71**	**0.23J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/27/23	0.5U	**0.68**	**0.10J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/23/23	**0.19J**	**1.10**	**0.22J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/23	**0.28J**	**0.86**	**0.47J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/27/23	**0.18J**	**1.20**	**0.22J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/24/23	**0.18J**	**0.92**	**0.21J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-28	09/23/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/24/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/21/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/18/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/23/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/24/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/25/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/28/20	1U	1U	1U	1UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/26/20	**0.098J**	**0.13J**	**0.085J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/20	0.5U	**0.87J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/20	0.5U	**0.080J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/20	**0.097J**	**0.11J**	**0.098J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/25/20	0.5U	**0.078J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/29/20	0.5U	**0.088J**	0.5U	0.5UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/30/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/23/20	0.5U	**0.14J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/26/21	**0.091J**	**0.08J**	**0.059J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/25/21	0.5U	**0.11J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/21	0.5U	**0.068J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/21	**0.07J**	**0.11J**	**0.059J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/21	0.5U	**0.087J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/21	0.5U	**0.096J**	**0.073J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/29/21	**0.10J**	**0.10J**	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/26/21	0.5U	**0.081J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/24/21	0.5U	**0.09J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/20/21	**0.14J**	**0.22J**	**0.099J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/23/21	**0.13J**	**0.19J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/17/21	**0.14J**	**0.16J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/27/22	**0.16J**	**0.24J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/22/22	**0.13J**	**0.23J**	**0.10J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/22	**0.13J**	**0.20J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/22	**0.11J**	**0.20J**	**0.098J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/22	**0.088J**	**0.20J**	**0.089J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/22	**0.11J**	**0.24J**	**0.10J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/22	**0.15J**	0.5U	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/22	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/23/22	**0.084J**	**0.24J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/27/22	**0.17J**	**0.26J**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/18/22	**0.17J**	**0.22J**	**0.18J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/21/22	**0.15J**	**0.24J**	**0.15J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/25/23	**0.14J**	0.5U	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/21/23	**0.20J**	**0.21J**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/22/23	**0.21J**	**0.24J**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/27/23	**0.11J**	**0.21J**	**0.16J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/23/23	**0.16J**	0.5U	**0.20J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/23	**0.22J**	0.5U	**0.28J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/27/23	**0.14J**	**0.22J**	**0.19J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/24/23	0.5U	**0.24J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-8	09/23/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/24/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/21/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/18/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/23/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/24/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/25/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/28/20	1U	1U	1U	1UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/26/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/20	**0.075J**	0.5U	**0.077J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/20	**0.068J**	0.5U	**0.076J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/20	**0.12J**	**0.064J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/25/20	**0.11J**	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/29/20	0.5U	0.5U	**0.086J**	0.5UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/30/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/23/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/26/21	**0.12J**	**0.062J**	**0.092J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/25/21	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/21	**0.097J**	0.5U	**0.088J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/21	**0.075J**	0.5U	**0.069J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/21	**0.095J**	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/21	0.5U	0.5U	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/29/21	**0.099J**	0.5U	**0.13J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/26/21	**0.20J**	**0.099J**	**0.24J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/24/21	0.5U	**0.11J**	**0.068J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/20/21	**0.30J**	**0.58**	**0.20J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/23/21	**0.22J**	**0.49J**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/17/21	**0.19J**	**0.50**	**0.16J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/27/22	**0.18J**	**0.52**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/22/22	**0.13J**	**0.43J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/22	**0.12J**	**0.41J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/22	**0.099J**	**0.35J**	**0.094J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/22	**0.093J**	**0.39J**	**0.088J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/22	**0.12J**	**0.34J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/22	**0.13J**	**0.32J**	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/22	**0.14J**	**0.33J**	**0.15J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/23/22	**0.12J**	**0.51**	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/27/22	**0.20J**	**0.70**	**0.19J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/18/22	**0.18J**	**0.66**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/21/22	**0.15J**	**0.39J**	**0.13J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/25/23	**0.16J**	**0.46J**	**0.16J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/21/23	**0.28J**	**0.52**	**0.20J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/22/23	**0.29J**	**0.66**	**0.26J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/27/23	**0.08J**	**0.32J**	**0.089J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/23/23	**0.20J**	**0.40J**	**0.22J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/23	**0.28J**	**0.55**	**0.51**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/27/23	**0.16J**	**0.53**	**0.20J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/24/23	**0.17J**	**0.67**	**0.21J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-9	09/23/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/24/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/21/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/18/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/23/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/24/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/25/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/28/20	1U	1U	1U	1UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/26/20	**0.073J**	**0.094J**	**0.059J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/20	0.5U	**0.088J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/20	0.5U	**0.076J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/20	**0.074J**	**0.076J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/25/20	0.5U	**0.084J**	**0.061J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/29/20	0.5U	**0.088J**	0.5U	0.5UJ	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/30/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/23/20	0.5U	**0.11J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/26/21	0.5U	**0.082J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/25/21	0.5U	**0.076J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/21	0.5U	**0.078J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/21	**0.063J**	**0.09J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/21	0.5U	**0.073J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/24/21	0.5U	**0.085J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/29/21	0.5U	**0.081J**	**0.078J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/26/21	**0.072J**	**0.094J**	**0.072J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/24/21	**0.11J**	**0.09J**	**0.08J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/20/21	**0.11J**	**0.18J**	**0.079J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/23/21	**0.13J**	**0.19J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/17/21	**0.13J**	**0.23J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/27/22	**0.13J**	**0.20J**	**0.093J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/22/22	**0.11J**	**0.21J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/24/22	**0.12J**	**0.22J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/26/22	**0.11J**	**0.23J**	**0.10J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/25/22	**0.096J**	**0.21J**	**0.091J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/22	**0.093J**	**0.21J**	**0.085J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/28/22	**0.11J**	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/25/22	**0.10J**	0.5U	**0.084J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	09/23/22	**0.086J**	**0.21J**	**0.083J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	10/27/22	0.5U	**0.28J**	**0.15J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	11/18/22	**0.14J**	**0.23J**	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	12/21/22	**0.13J**	0.5U	**0.12J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	01/25/23	**0.13J**	0.5U	**0.14J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	02/21/23	**0.19J**	**0.22J**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	03/22/23	**0.19J**	**0.30J**	**0.18J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	04/27/23	**0.10J**	**0.20J**	**0.11J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	05/23/23	**0.14J**	0.5U	**0.16J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	06/21/23	**0.15J**	0.5U	**0.35J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	07/27/23	**0.14J**	**0.28J**	**0.16J**	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
	08/24/23	**0.13J**	**0.27J**	0.5U	0.5U	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02
COD-SW-29	09/23/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	10/24/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	11/21/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	12/18/19	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	01/23/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	02/24/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	03/25/20	1U	1U	1U	1U	X	X	X	X	X	X	X	X	X	X	X	X
	04/28/20	1U	1U	1U	1UJ	X	X	X	X	X	X	X	X	X	X	X	X
	05/26/20	0.5U	0.5U	**0.067J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/24/20	**0.065J**	0.5U	**0.076J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/28/20	0.5U	0.5U	**0.080J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/25/20	**0.12J**	**0.074J**	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	09/25/20	**0.11J**	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	10/29/20	**0.092J**	**0.065J**	**0.10J**	0.5UJ	X	X	X	X	X	X	X	X	X	X	X	X
	11/30/20	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	12/23/20	**0.075J**	0.5U	**0.076J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	01/26/21	0.5U	**0.061J**	**0.084J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	02/25/21	0.5U	0.5U	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	03/24/21	**0.10J**	0.5U	**0.083J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	04/26/21	**0.075J**	0.5U	**0.076J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	05/25/21	**0.10J**	0.5U	**0.11J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/24/21	**0.11J**	0.5U	**0.13J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/29/21	**0.11J**	**0.064J**	**0.13J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/26/21	**0.2J**	**0.12J**	**0.21J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	09/24/21	0.5U	**0.08J**	**0.057J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	10/20/21	**0.29J**	**0.43J**	**0.18J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	11/23/21	**0.19J**	**0.33J**	**0.15J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	12/17/21	**0.20J**	**0.32J**	**0.16J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	01/27/22	**0.19J**	**0.39J**	**0.13J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	02/22/22	**0.14J**	**0.27J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	03/24/22	**0.12J**	**0.25J**	**0.10J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	04/26/22	**0.11J**	**0.28J**	**0.089J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	05/25/22	**0.082J**	**0.26J**	**0.072J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/21/22	**0.12J**	**0.36J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/28/22	**0.10J**	**0.33J**	**0.13J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/25/22	**0.15J**	**0.41J**	**0.14J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	09/23/22	**0.13J**	**0.44J**	**0.12J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	10/27/22	**0.19J**	**0.49J**	**0.18J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	11/18/22	**0.17J**	**0.48J**	**0.17J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	12/21/22	**0.14J**	**0.28J**	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	01/25/23	**0.15J**	**0.27J**	**0.15J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	02/21/23	**0.31J**	**0.33J**	**0.27J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	03/22/23	**0.26J**	**0.41J**	**0.23J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	04/27/23	0.5U	**0.20J**	0.5U	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	05/23/23	**0.20J**	**0.37J**	**0.22J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	06/21/23	**0.24J**	**0.33J**	**0.29J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	07/27/23	**0.15J**	**0.39J**	**0.19J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X
	08/24/23	**0.17J**	**0.65**	**0.18J**	0.5U	X	X	X	X	X	X	X	X	X	X	X	X

TABLE 4.3-7
Monthly Surface Water Sampling Results
Former York Naval Ordnance Plant - York, PA

Sample Location	Sample Date	Constituent of Concern Result in Micrograms Per Liter (µg/L) (1)				PADEP Surface Water Quality Criteria in Micrograms Per Liter (µg/L)											
						Fish and Aquatic Life								Human Health			
						AFC	AFC	AFC	AFC	CFC	CFC	CFC	CFC	CRL	CRL	H	CRL
		TCE	PCE	cis12DCE	VC	TCE=2,300	PCE=700	cis12DCE=NE	VC=NE	TCE=450	PCE=140	cis12DCE=NE	VC=NE	TCE=0.60	PCE=10	cis12DCE=12	VC=0.02

cis12DCE - cis-1,2-Dichloroethene
PCE - Tetrachloroethene
TCE - Trichloroethene
VC - Vinyl Chloride
(1) Non-detect results are shown as the laboratory Reporting Limit (RL) followed by "U". Detected concentrations between the laboratory RL and the Method Detection Limit (MDL) are shown as the approximate concentration reported by the laboratory followed by "J". These "J" concentrations were positively identified in the sample and are qualitatively acceptable. The PADEP surface water quality criteria of 0.02 µg/L for VC is lower than can be reliably achieved using Pennsylvania-certified analytical methods. However, the analytical method quantitation limit (QL) and RL for VC is acceptable for criteria comparison.
(2) - Sample from location COD-SW-17 was collected on 10/09/19 because it was dry (no flow from spring) on 09/23/19.
Bold font indicates analyte detected in sample
Surface water quality criteria from 25 Pa. Code Chapter 93 - Water Quality Standards (Table 5 - Water Quality Criteria for Toxic Substances). Criteria are reviewed periodically and are subject to change.
AFC - Acute Fish Criteria or Criteria Maximum Concentration
CFC - Chronic Fish Criteria or Criteria Continuous Concentration
CRL - Cancer Risk Level at $1x10^{-6}$
H - Threshold human health criteria
NE - Criterion not established
N/A - Criterion does not apply to samples from this location
X - Criterion applies to samples collected from this location
Blue colored highlight indicates sample result is less than criterion
Tan colored highlight indicates sample collected during WPL groundwater extraction system shutdown test

TABLE 5.3-1
Master Summary of Agreements
Former York Naval Ordnance Plant - York, PA

Entity	Address/Location description	Land Use Area	Agreement Type	Milestones
Harley-Davidson Motor Company Operations, Inc.	1425 Eden Road (East Campus) - Parcel - 46000KI02350000000	1 and 2	Settlement Agreement, U.S. Government (Jan. 1995); OEW Settlement Agreement (11-27-13); Environmental Covenant (TBD)	
NP York 58, LLC (NP York) formerly Redevelopment Authority of the County of York (RACY)/NP York n/f York County Industrial Development Authority (YCIDA) -	1445 Eden Road (West Campus) - Parcel - 46000KI0235B000000	3	UECA Environmental Covenant approved by PADEP 6-25-12; Third Amendment to Consent Order and Agreement (10-15-15) between PADEP, H-D, YCIDA, RACY and NP York. Deed transfer/Easement Agreements (6-8-12) - YCIDA and NP York 58, LLC (NP York) entered into a Sale Agreement 5-5-15; YCIDA Sold to Redevelopment Authority of the County of York (RACY) 11-9-15; RACY transferred ownership to NP York 1-3-17. Updated Environmental Covenant (TBD); Updated Easements (TBD)	Third Amendment to Consent Order and Agreement Recorded 11-19-15. Declaration of Easements and Covenants 6-8-12 - Easements and Access to wells, remediation facilities, common driveway, and common stormwater facilities. Access for environmental assessments, monitoring and remediation.
Tate Residence - Spring sampling location S-6	500 Paradise Rd Parcel - 460000800020000000	4	No existing Agreement - Verbal authorization	Long term sampling has been conducted via verbal requests. Owner very cooperative.
Folk residence - Residential Well location RW-4	677 Paradise Road Parcel - 460000800050000000	4	Access Agreement (August 2007) - Complete	Access Agreement (Aug. 2007) for connection to public water, and allows ongoing sampling and well abandonment.
Kevin Zeller [Residence]	1335 Canterbury Lane Parcel - 460000601540000000	4	Temporary Construction, and Easement Agreement w/ Kevin J. Zeller (7-20-18) - Complete	Right of way and easement for installation/maintenance of SPBA electrical meter, and underground wire/conduit to Met-Ed pole; Access Agreement signed on July 20, 2018. MWN recorded agreement 7-26-18; construction, restoration and inspection completed 8-20-18.
York Water Company [pumping station]	1500 N. Sherman St. Parcel - 460000601840000000	4	Site Access Agreement (7-23-07) - Complete	Access agreement signed in July 2007. Allows monitoring well installation/construction & elevation survey, ongoing gw sampling, well modification/maint./abandonment on their property at corner of N. Sherman St and Canterbury Ln.
K/G Whiteford Ltd. Partnership -	1201 Eden Road Parcel - 46000JI0034E000000	5	6th Amendment to License Agreement Completed (expired Dec. 2023)	Property owned by Kinsley Properties & Graham. A one-year access agreement extension was signed by Kinsley 10-20-22. Authorizes access for groundwater level measurement and groundwater sampling
Giambalvo Motors -	1390 Eden Road Parcel - 46000JI0037B000000	5	Easement Agreement (11-2-12) - Complete	A permanent easement for existing and new wells and sampling
Pennsylvania Department of Transportation (PennDOT)	State Route 0030/ARSENAL RD	5	Waiver (TBD) PENNDOT ROE Agreement 088896 (8-15-07)	ROE agreement for soil sampling expired 1 year after initial entry (but renewable upon request)
Army Reserve Training Center	605 ARSENAL RD Parcel - 46000JI0034C000000	5	Easement No. DACA-31-2-02-385 (7-3-02)	Permanent Sanitary Sewer Easement for Pipeline ROW
[Kinsley Properties, Inc.] Sand Bank Hill LLC - Quarry	SAND BANK RD Parcel - 46000KI02330000000	5	Site Access Agreement (10-16-08) - Complete License Agreement (9-4-20) and First Amendment (9-4-23) - for access, construction, monitoring/sampling of MW-186	Site access agreement signed in October 2008. Allows access for industrial well monitoring, well modifications, elevation survey, and ongoing water level measurements. MW-186 constructed in 2020.
Pennsylvania-American Water Company (PAWC) [formerly York City Sewer Authority (YCSA)]	1625 Toronita St. Parcel - 36000JI00380000000	5	Easement Agreement (March 16, 2022) - Complete [Allows access to MW-148A for monitoring and sampling]	PAWC finalized purchase from YCSA in April 2022. Easement Agreement extension executed in March 2022; Well easement area originally recorded 7-18-13.

TABLE 5.3-1
Master Summary of Agreements
Former York Naval Ordnance Plant - York, PA

Entity	Address/Location description	Land Use Area	Agreement Type	Milestones
Norfolk Southern Railway Company	Railroad West of West Campus	6	Pipeline Placement Agreement/License Agreement Effective 4-3-06	8" ductile GWTS discharge pipeline, within 20" steel pipe beneath RR
CSX Transportation Inc.	Railroad West of West Campus	6	Pipeline Placement Agreement/License Agreement No. CSX-055773 Effective 8-31-06	GWTS discharge pipeline beneath RR
York County Rail Trail Authority (YCRTA)	Along Codorus Creek @ Rt 30 (east bank) - Parcel - 46000JI00370000000	6	Easement Agreement (1-24-13) - Complete	New Easement Agreement signed by YCRTA 1-24-13
MOLT LLC; Formerly Robert S. Gourley Trust	property west of Norfolk Southern RR, and east of YCRTA property Parcel - 46000KI02390000000	6	Easement Agreement (8-20-21) - Complete. Provides ROW/Easement for GWTS effluent forcemain utility maintenance/removal.	Easement Agreement executed by Themistoklis "Themi" D. Sacarellos on August 20, 2021.
County of York - York County Admin Center	1.26 acre parcel west of Norfolk Southern RR, east of YCRTA property, and South of Molt LLC; Parcel - 46000JI00360000000	6	Easement Agreement (5-7-14) - Complete	Easement Agreement for access to maintenance roadway and path for well monitoring (YCRTA property) executed on May 7, 2014.
USACE/U.S. Govt Flood Control -Levee Easement	Along Codorus Creek	6	Letter Permit No. DACW-31-3-18-513	Letter Permit extension received from C. Homesley 8-6-18 [Grants Permit No. DACW-31-3-18-513, and extends conditions until 8-20-23].