Remedial Investigation/Risk Assessment Report

East 10th Street Site, Marcus Hook, Pennsylvania

December 2020

Environmental Resources Management
75 Valley Stream Parkway
Suite 200
Malvern, PA 19355

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REPORT

Prepared For:

FMC Corporation
Philadelphia, PA

Remedial Investigation/Risk Assessment Report
East 10th Street Site, Marcus Hook, Pennsylvania

December 2020

Environmental Resources Management
75 Valley Stream Parkway
Suite 200
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Act 2 – PA Land Recycling and Environmental Remediation Standards Act

AMSL – Above Mean Sea Level

AOC – Administrative Order by Consent

AST – Aboveground Storage Tank

bgs – Below ground surface

COA – Consent Order and Agreement

CSM – Conceptual Site Model

CVOC – Chlorinated Volatile Organic Compounds

DCE – Dichloroethene

DRBC – Delaware River Basin Commission

ERM – Environmental Resources Management, Inc.

FMC – FMC Corporation

HHRA – Human Health Risk Assessment

HSCA –PADEP's Hazardous Sites Cleanup Act

IRIS – Intigrated Risk Information System

MHBCC – Marcus Hook Business and Commerce Center

MHDP – Marcus Hook Development Park

mg/kg – Milligram per kilogram (soil concentration equivalent to parts per million)

mg/L – Milligram per liter (water concentration equivalent to parts per million)

MSC – Medium Specific Concentration

NRCS – Natural Resource Conservation Service

PADEP – Pennsylvania Department of Environmental Protection

PAFBC – Pennsylvania Fish and Boat Commission

PAH – Polycyclic aromatic hydrocarbon

PCB – Polychlorinated biphenyls

PID – Photoionization detector

PNDI – Pennsylvania Natural Diversity Index

ppb – Parts per billion

ppm – Parts per million

RCRA – Resource Conservation and Recovery Act

RI/RA Report – Remedial Investigation/Risk Assessment Report

RIWP – Remedial Investigation Work Plan

PCE –Tetrachloroethene

PVC – Polyvinyl chloride

R&D – Research and development

SFO – Significant Foundation Opening

SHS – Act 2 Statewide Health Standards

SSS – Site-Specific Standards

SPLP – Synthetic Precipitation Leachate Procedure

SV_{GW} – Vapor Intrusion Screening Value for groundwater

SVns – Vapor Intrusion Screening Value for near source soil gas

SVOC – Semivolatile Organic Compound

SVsoil – Vapor Intrusion Screening Value for soil

SVss – Vapor Intrusion Screening Value for sub-slab soil gas

TAL – Total Analyte List

TCB – Trichlorobenzene

TCE –Trichloroethene

TCL – Target Compound List

µg/kg – Micrograms per kilogram (soil concentration equivalent to parts per billion)

µg/L – Micrograms per liter (water concentration equivalent to parts per billion)

USEPA – United States Environmental Protection Agency

USGS – United States Geologic Survey

UST – Underground Storage Tank

VOC – Volatile Organic Compound

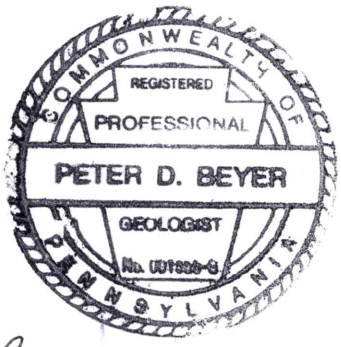
WWTP – Wastewater Treatment Plant

XRF – X-ray fluorescence

PROFESSIONAL GEOLOGIST CERTIFICATION

Remedial Investigation/Risk Assessment Report, East 10th Street, Marcus Hook, Pennsylvania

By affixing my seal, I am certifying that information which was developed by ERM for use in this report is true and correct, and that information obtained from other parties was utilized without intentional modification. I further certify that I am licensed to practice in the Commonwealth of Pennsylvania and that it is within my professional expertise to verify the correctness of the appropriate information.



Peter D. Beyer, P.G. (License No. PG-001550)

Signed and sealed this day 5/21/21

EXECUTIVE SUMMARY

Environmental Resources Management, Inc. (ERM), on behalf of FMC Corporation (FMC), has prepared this Remedial Investigation/Risk Assessment Report (RI/RA Report) for the East 10th Street Site in Marcus Hook, Pennsylvania (Site). This report documents the results and findings of the environmental site investigation conducted by FMC pursuant to the Consent Order and Agreement (COA) entered into between the PADEP and FMC on June 23, 2003. The COA, which was established under the PADEP's Hazardous Sites Cleanup Act (HSCA) Program, prescribes that the remediation of contamination identified in the Site investigation "meet an Act 2 standard or a combination of Act 2 standards." Thus, this report was developed pursuant to the requirements of the COA and to be consistent with the PA Land Recycling and Environmental Remediation Standards Act (Act 2), 25 Pa. Code Chapter 250 (Land Recycling Program) and the related Land Recycling Program Technical Guidance Manual (June 8, 2002).

The Site was initially operated as a viscose rayon manufacturing plant, changing over to cellophane production in 1946. FMC owned and operated the facility from 1963 through 1977, at which point FMC discontinued manufacturing operations and sold the property to Marcus Hook Development Park (MHDP). The 36-acre Site was subdivided into 25 smaller parcels (referred to as Lots). In 1986, much of the Site was sold to Marcus Hook Business and Commerce Center (MHBCC). The lots have been and are currently owned and operated by various entities for commercial and light industrial purposes.

Access to the Site is largely unrestricted and signs of trespassing (e.g., dumping, etc.) are evident. Portions of the former manufacturing building complex remain, although much of the complex has been demolished. Remnants of the demolished structures, such as foundations, slabs, basements and corridors, as well as demolition debris remain at many lots.

In 1991, the US Environmental Protection Agency (USEPA) executed three Administrative Orders by Consent (AOC) with FMC, Lassoff Group (a property manager for MHBCC at the time) and MHBCC to conduct removal activities at the Site under the oversight of USEPA. In 1992, the principals of MHBCC pleaded guilty to violating federal environmental laws, including illegal disposal and unlawful waste management practices at the Site involving asbestos and polychlorinated biphenyls (PCBs). In 1998, PADEP initiated a HSCA response and a phased investigation at the Site to determine if additional response actions were needed to address remaining environmental concerns. On June 23, 2003, the COA was entered into between PADEP and FMC. Pursuant to the COA, FMC agreed to implement certain interim response actions, as outlined in PADEP's Statement of Decision (December 19, 2002), and conduct additional site investigation activities.

FMC completed the interim response activities in 2004-2005 and initiated site investigation activities in accordance with PADEP-approved work plans. The investigative activities focused on the three elements specified in the COA: 1) initiate a deep groundwater study; 2) expand the prior surface water and sediment investigation; and 3) conduct a detailed and thorough study of the carbon disulfide (CS_2) contamination detected in soil on Lot 19. FMC performed site

investigative activities in stages from 2004 through 2013. FMC presented the findings of these activities to PADEP in a *Phase II Site Investigation Report* (dated January 2008), interim status progress reports and letters, and during periodic project status meetings.

In 2015, at the request of PADEP, FMC initiated a comprehensive site-wide remedial investigation to obtain data to supplement the existing site characterization data and to more broadly characterize current Site conditions. Additionally, PADEP stated during a December 2014 meeting that in order to grant an Act 2 release or meet an Act 2 standard, current soil data would be required to characterize the existing exposure conditions. The results and findings from this site-wide remedial investigation, supplemented by findings from prior investigative activities, form the basis of the site characterization, conceptual site model (CSM), and risk assessment presented in this RI/RA Report.

The investigation included the collection and analysis of about 400 soil samples, 19 site-wide groundwater sampling events (including eight consecutive quarterly events in 2016-2018 for the 41-well monitoring network), sediment sampling in Marcus Hook Creek, and reconnaissance and water sampling in the Site building basements and sewer network. The investigation included a focused investigation of the closed former CS_2 storage moat and vicinity to evaluate whether or not this area was an active source to soil and/or groundwater contamination. Additionally, FMC performed a soil-gas and soil investigation (73 Gore-Sorber® samples and 28 soil borings) to identify whether or not active source(s) remain related to the organic compounds detected in groundwater.

The results of investigations indicate Site soils and groundwater contain several inorganic and organic regulated substances above the Act 2 Statewide Health Standards (SHS) non-residential use Medium Specific Concentrations (MSCs); however, the results did not indicate the presence of active on-going sources of contamination. A high-level summary of the results and findings is presented below:

- Surface soils: Over 100 surface soil samples were collected during the initial phase of the site-wide remedial investigation, and only 22 samples had reported concentrations above the non-residential direct contact and/or soil-to-groundwater MSCs. Regulated substances reported above MSCs included polycyclic aromatic hydrocarbons (PAHs, such as benzo(a)pyrene), several metals (antimony, arsenic, lead, mercury, vanadium), and Aroclor 1260. Additional samples were collected to refine the delineation at these locations.
- Subsurface soils: Over 150 subsurface soil samples were collected during the initial phase of the site-wide remedial investigation; none had reported concentrations above non-residential direct contact MSCs, and only 39 samples had reported concentrations above soil-to-groundwater MSCs. Regulated substances reported above soil-to-groundwater MSCs included PAHs, several metals (antimony, arsenic, lead, manganese, mercury, thallium), and 1,2,4-trichlorobenzene (1,2,4-TCB).
- Groundwater: The current Site monitoring well network includes 17 overburden and 23 bedrock monitoring wells. Several organic and inorganic regulated substances were detected in one or more monitoring wells at concentrations above their

respective non-residential used aquifer MSC, including CS_2, chlorinated organics (e.g., 1,1-dichloroethene, trichloroethene, perchloroethene, 1,2,4-TCB), and metals (antimony, arsenic, beryllium, cadmium, cobalt, lead, manganese, nickel, selenium, thallium, vanadium, and zinc). PCBs were not detected in any groundwater samples. The nature and extent of concentrations suggest more localized and discontinuous areas of impact rather than a large, site-wide plume. Additionally, most of the monitoring wells indicate stable or decreasing concentration trends.

- Source area evaluations: Soil sample and groundwater sample results and trends indicate the likely historical source areas for the volatile organic regulated substances are not active and are not continuing to contribute contaminant mass. The focused soil and soil-gas investigation conducted within the eastern half of the Site did not identify active on-going sources related to organics detected in groundwater. Additionally, the focused investigation conducted in the former CS_2 storage moat area demonstrated that the former storage moat and soils in this area are not acting as an on-going source of groundwater contamination. The investigation in the vicinity of the former CS_2 storage moat area also confirmed that two underground storage tanks and one storage moat structures had been removed and another moat structure and tanks had been closed in-place (emptied and entombed with flyash and concrete).
- Vapor intrusion into buildings: All soil samples within the unsaturated zone were below the soil VI screening levels. Additionally, groundwater was determined not to be a concern based on the presence of a clean groundwater lens within the overburden. However, since a human health risk assessment is being conducted, screening against alternate values (1/10th the generic soil-to-groundwater MSCs and 1/10th groundwater MSCs) was completed, and several volatile substances were carried forward into the risk assessment.
- Basements and sewer network: The basements and sewer system pose a potential physical hazard (e.g., areas of subsidence, open manholes), but the water sample results do not suggest they are an active source of contamination or a significant contaminant migration pathway.
- Marcus Hook Creek: The surrounding urban/industrial setting and the permitted discharge from the neighboring refinery materially influence the conditions of Marcus Hook Creek. The sample results indicate the presence of organic and inorganic constituents common to urban waterways, and are generally consistent with samples collected from downstream sections of the Creek and the Delaware River. The permitted discharge from the neighboring refinery generates a significant portion of the base flow in Marcus Hook Creek and increases the water temperature to over 90°F based upon recent in-stream measurement.

FMC is applying a combination of Act 2 standards, including SHS and Site-Specific Standards (SSS), to address the regulated substances analyzed for and/or identified in soil and groundwater. Delineation of the vertical and horizontal extent of contamination above the selected standards in soil and groundwater, as required under §250.408(b), is complete.

FMC has completed an Act 2 risk assessment to evaluate potential risks to both human and ecological receptors posed by conditions at the Site. The entire site will be subject to environmental covenants restricting use to non-residential and prohibiting groundwater usage. Based upon this evaluation:

- Soils - two complete exposure pathway for soil that pose a potential unacceptable risk were identified. The first is commercial/industrial worker direct contact to surface soils in two areas on Lot 17 near former transformer salvage operations (performed by others subsequent to FMC ownership as described above) where elevated Aroclor 1260 concentrations were identified. The second is potential future vapor intrusion risk from 1,2,4-tirchlorobenzene in soil on portions of Lot 4, 1,4-dichlorobenzene in soil on portions of Lot 17, and napthalene in soil on portions of Lots 11, 12, 22, and 24.
- Groundwater - discharge to surface water of Marcus Hook Creek is a complete exposure pathway for groundwater. Based on calculated Site-Specific Standards (SSS) protective of both human and ecological receptors, groundwater concentrations discharging to Marcus Hook Creek are below these levels. Although there are no known potable or industrial use of groundwater on or downgradient of the Site), institutional controls restricting groundwater use would ensure that the direct contact pathway remains incomplete. Future construction worker and utility worker exposure to groundwater may be complete pathways; however, the risk assessment indicates that potential cancer risks and non-cancer hazards for all groundwater exposure pathways under these scenarios are within the acceptable limits.

In accordance with the COA, FMC will submit a Cleanup Plan following PADEP approval of the RI/RA Report. The Cleanup Plan, referred to as a "Remediation Plan" in the COA, will present a remediation plan and schedule to address the contamination identified in the remedial investigation to attain the combination of Act 2 standards presented in this RI/RA Report. The Cleanup Plan will also present the evaluation of residual risk based upon the proposed remediation elements. As required in the COA, FMC will also submit a Notice of Intent to Remediate, which will describe any remedial actions FMC proposes to perform, to PADEP within 30 days of submitting the Cleanup Plan.

1.0 INTRODUCTION

Environmental Resources Management, Inc. (ERM), on behalf of FMC Corporation (FMC), has prepared this Remedial Investigation/Risk Assessment Report (RI/RA Report) for the East 10th Street Site in Marcus Hook, Pennsylvania (Site). This report documents the results and findings of the environmental site investigation conducted by FMC pursuant to the Consent Order and Agreement (COA) entered into between the PADEP and FMC on June 23, 2003. The COA, which was established under the PADEP's Hazardous Sites Cleanup Act (HSCA) Program, prescribes that the remediation of contamination identified in the Site investigation "meet an Act 2 standard or a combination of Act 2 standards." Thus, this report was developed pursuant to the requirements of the COA and to be consistent with the PA Land Recycling and Environmental Remediation Standards Act (Act 2), 25 Pa. Code Chapter 250 (Land Recycling Program) and the related *Land Recycling Program Technical Guidance Manual* (June 8, 2002).

1.1 PURPOSE OF THE RI/RA REPORT

This RI/RA Report has been prepared to fulfill FMC's obligation under Paragraph 4(h) of the COA regarding the Final Site Investigation Report (note: for clarity and consistency with Act 2, the term "RI/RA Report" is used herein). FMC will submit under separate cover a Cleanup Plan to fulfill the additional requirements under Paragraph 4(h) to submit a Remediation Plan and implementation schedule to remediate the contamination identified in the RI/RA Report "to meet an Act 2 standard or a combination of Act 2 standards."

This RI/RA Report presents the results of environmental investigation activities completed by FMC pursuant to the COA to characterize and delineate potentially affected areas identified by FMC and PADEP, including soil, sediments in Marcus Hook Creek, a former CS_2 storage moat, subsurface structures, and groundwater.

FMC is applying a combination of Act 2 standards, including SHS and SSS, to address regulated substances in soil and groundwater. Accordingly, FMC has evaluated in a risk assessment, potential risks to both human and ecological receptors posed by current conditions at the Site under current and reasonable potential future use scenarios without accounting for either anticipated future remedial actions or institutional/engineering controls.

This RI/RA Report was developed pursuant to the requirements of the COA and to be consistent with the Act 2, 25 Pa. Code Chapter 250 (Land Recycling Program) and the related *Land Recycling Program Technical Guidance Manual* (January 19, 2019).

1.2 REPORT ORGANIZATION

This report is organized into the following sections:

Section 1: Introduction, including the purpose of the report;

Section 2: Site History, including a summary of the property ownership and operations, prior environmental investigations and regulatory history

Section 3: Site Setting and Physical Description, including a description of the site location, geologic and hydrogeological setting, and natural resources;

Section 4: Scope of the Investigation, providing an overview of the scope of work for the principal site investigation activities performed by FMC;

Section 5: Results and Findings, presenting the results of the environmental investigations performed by FMC;

Section 6: Conceptual Site Model, presenting the site setting, areas of potential concern for soil and groundwater, exposure pathways and fate and transport;

Section 7: Risk Assessment, presenting the results of the human health and ecological risk assessments and development of the soil and groundwater SSS; and

Section 8: Summary and Conclusions

2.0 SITE HISTORY

The Site is located on East 10th Street in the Borough of Marcus Hook, Pennsylvania (Figure 1). The Site is zoned for mixed/commercial/industrial use, and is located within a mixed use residential, industrial, and commercial area.

2.1 SITE HISTORICAL OWNERSHIP AND USE

The property was reportedly first developed for industrial purposes by American Viscose Corporation between 1900 and 1910. The Site was initially operated as a viscose rayon manufacturing plant, changing over to cellophane production in 1946. In 1963, the property was purchased by FMC, who continued the cellophane manufacturing operations. FMC ceased its operations at the Site in 1977. FMC sold the property to Marcus Hook Development Park (MHDP) in 1978. Since that time, the Site was subdivided into 25 smaller parcels, known as "Lots," as shown on Figure 2, which have been owned and operated by various entities for commercial and industrial purposes, as described below. The historical use of the Site by Lot is provided on Table 1. Note that there are two Lots that are called Lot 1 but have different block numbers. Lot 1 adjacent to East 10th Street is owned by Keystone Community Alliance. Lot 1 on the southwestern corner of the Site is owned by the Borough of Marcus Hook. Herein, "Lot 1" will refer to the Lot adjacent to East 10th Street and "Lot 1 Borough of Marcus Hook" will refer to the Lot on the southern end of the Site.

Post-FMC Property Ownership

After purchasing the Site in 1978, MHDP conducted salvage operations at the property. In 1986, much of the Site (Lots 1, 2, 3, 8-15, 17, 20-23) was sold to Marcus Hook Business and Commerce Center (MHBCC). In 1992, MHBCC and its principals pleaded guilty to violating federal environmental laws, including illegal disposal and unlawful waste management practices at the Site involving asbestos and PCBs. The post-FMC property ownership is summarized by lot on Table 1.

As demonstrated by the ownership summarized on Table 1, multiple tenants have occupied several of the buildings on-site during the period following FMC's ownership of the Site.

Current operations involve miscellaneous light industrial and commercial activities, including: the Marcus Hook-Trainer Fire Department on Lots 4 and 5; asbestos abatement contractor ACI Tech and a concrete surface preparation contractor Shot Blast, Inc. on Lot 6; and material storage on Lot 24 which is owned by Omega Wood.

FMC's Former Operations

The Site was initially operated as a rayon manufacturing plant, changing over to cellophane production in 1946. The production of rayon and cellophane at the Site involved: steeping wood pulp (cellulose) in caustic soda (sodium hydroxide); shredding the pulp into "crumbs" and

aging the crumbs; treating the crumbs with CS_2 under vacuum; dissolving the crumbs in caustic soda (viscose is formed); filtering and de-aerating the viscose; extruding the viscose in a sulfuric acid bath (extruded through slits for cellophane sheets or small diameter holes for rayon fiber/yarn); and finally washing and processing the resulting material (rayon yarn or cellophane sheets) and finishing by using solvents (ethanol, ethyl acetate, tetrahydrofuran, and toluene), plasticizers, or lacquers to coat the material. The operations by lot are summarized on Figure 3 and Table 1.

Other Site support operations included:

- Power generating - the Power House, which was located primarily on Lot 9, was originally coal-fired and later switched to fuel oil fired.
- Acid reclamation - The acid reclaim system was located on Lot 12.
- Incineration – a coal-fired incinerator was located on Lot 13.
- Coal storage – coal was stored on Lots 13 and 14.
- Wastewater treatment - the wastewater treatment plant (WWTP) located on Lot 24 was originally constructed in 1945 by American Viscose Corporation. The WWTP was modified in 1957 to include sludge dewatering and two earthen sludge lagoons. The system was designed to remove metallic hydroxides and organic matter from wastewaters from the Steeping and Churn and Mix operations.
- Maintenance and research & development (R&D) – maintenance shops and R&D areas were located in several areas of the Site, including Lots 15 and 18.

Known bulk chemical storage included:

- Two 275-gallon fuel (diesel and gasoline or kerosene) aboveground storage tanks (ASTs) located in a garage located on Lot 4, which were removed at some point before the 2000 Foster Wheeler *Final Building Reconnaissance Report*;
- Glycerin & ethylene glycol ASTs located on Lot 23, which were removed prior to 1990, although details of the removal were not provided in the documents reviewed by FMC;
- 30 USTs on Lot 22 containing toluene, ethyl alcohol, butyl alcohol, ethyl acetate, butyl acetate, tetrahydrofuran, and “unknown trade name” solvents, which were decommissioned in 1977 and removed in 1998 (NTH, 1990);
- An unknown number of 250-gallon and 500- to 1,000-gallon gasoline USTs were located in the garage located on Lot 4. The USTs were removed sometime between 1978 and 2002, based on their absence during the 2002 Foster Wheeler investigations; and
- Ten 17,000-gallon CS_2 USTs located on Lot 19. In 1981, FMC closed the USTs by removing the CS_2, stabilizing the residuals within the tanks with fly ash, and filling and sealing the tanks with concrete

Previous non-FMC environmental activities are summarized in Section 2.2 and presented in Foster Wheeler Environmental Corporation's *Final Phase I Site Investigation Report, June 2002* that was prepared for the PADEP.

The above noted areas and materials were considered in the development of FMC's remedial investigation approach. Sample locations were distributed across the entire site and encompassed these areas. Samples were analyzed in accordance with PADEP approved Work Plans for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Metals, PCBs, asbestos, as well as several organic compounds that were reportedly used during historical operations (including butyl alcohol, butyl acetate, ethyl alcohol, ethyl acetate, tetrahydrofuran, and ethylene glycol) as summarized in Section 4. In addition, the storage tank areas were investigated during prior environmental investigations conducted by others, as summarized below.

2.2 PRIOR ENVIRONMENTAL INVESTIGATION ACTIVITIES AND REGULATORY BACKGROUND

Numerous environmental investigations and reports have been prepared since 1987 at the Site. Between 1987 and 2002 reports were prepared on behalf of USEPA, PADEP, FMC, MHBCC and MHDP, as summarized in *Final Phase I Site Investigation Report* (Foster Wheeler, 2002). From 2003 to present, reports were prepared on behalf of FMC. An investigation and report summary is provided on Table 2.

Regulatory Background

In February 1991, the USEPA executed three Administrative Orders by Consent (AOC) with FMC, Lassoff Group (a property manager for MHBCC at the time) and MHBCC to conduct removal activities at the Site under the oversight of USEPA. Work performed under the AOCs included removal of asbestos from occupied areas within buildings on the Site, removal of drums and equipment containing PCB wastes from buildings and an investigation of a portion of the property. In 1992, the principals of MHBCC pleaded guilty to violating federal environmental laws, including illegal disposal and unlawful waste management practices at the Site involving asbestos and PCBs.

In 1998, PADEP initiated a HSCA response and subsequently orchestrated a phased investigation at the Site to determine if additional response actions were needed to address remaining environmental concerns, including soil and ground water contamination, buried asbestos, and hazardous substances remaining on Site. Investigation activities were documented in the *Final Phase I Site Investigation Report* (Foster Wheeler, 2002), and included a prompt interim response removal of certain hazardous materials. Based on the findings of this report, PADEP acted to initiate additional interim response removals and continuation of Site investigation activities, as documented in a Statement of Decision (SOD, December 19, 2002).

On June 23, 2003, the COA was entered into between PADEP and FMC. Pursuant to the COA, FMC agreed to implement certain interim response, which were presented in the SOD, and Site investigation and remediation activities. FMC completed the interim response activities in 2004-2005 consisting of: 1) removing and disposing off-site approximately 5 tons of solids from three substructures (manholes on Lot 10 and Lot 13, and an inlet box/sump type structure on Lot 15); 2) removing and disposing off-site approximately 100 tons of solids removed from the former spray pond (Lot 13); 3) removing and disposing off-site approximately 100 tons of soil from an area on Lot 20; and 4) re-characterizing surface soils in an approximately 10-foot by 100-foot area on Lot 17.

FMC documented interim response activities in the *Interim Response Final Report* (ERM, 2006), which was submitted to PADEP in February 2006. In addition, FMC has completed additional investigation activities at the site in accordance with the COA as is discussed in Section 2.2.2.

FMC's Site Investigation Activities under the COA

The COA specifically identified the following site investigation activities (Paragraph K of the COA):

- Initiate a deep groundwater study;
- Expand the prior surface water sediment investigation; and
- Conduct a detailed and thorough study of the CS_2 contamination detected in soil on Lot 19.

FMC completed site investigation activities in accordance with the following PADEP-approved work plans to address the three above listed items specifically identified in the COA: *Phase II Site Investigation Work Plan*, dated March 9, 2004 (ERM, 2004a); *Preliminary Results of Phase II Site Investigation*, dated September 23, 2004 (ERM, 2004b); and *Work Plan for CS_2 Source Area Investigation*, dated September 27, 2005 (ERM, 2005). The investigative activities relating to these work plans were conducted in stages and continued through 2007. These activities included a soil investigation near the former CS_2 storage moat, a soil gas survey adjacent to a building in the vicinity of the former CS_2 storage moat and a groundwater investigation that included the installation of 14 new wells and sampling of 24 Site wells. The findings of these activities were presented in a *Phase II Site Investigation Report* that was submitted to PADEP in September 2007, and revised in January 2008 based on PADEP comments. The data from these investigations is included on Tables 5, 6 and 12.

FMC continued groundwater monitoring activities and completed additional soil investigations at the Site in 2010 in accordance with a scope of work presented in FMC's October 9, 2009 letter to PADEP, and in 2015-2017 in accordance with *Remedial Investigation Work Plan* (RIWP), submitted to PADEP on April 28, 2015 (ERM, 2015). The purpose of the RI was to more broadly characterize current Site conditions as requested by PADEP since 1) the prior investigation was focused on the three areas/items specifically identified in the COA, and 2) PADEP informed FMC during a December 2014 meeting that in order to grant an Act 2 release or meet an Act 2

standard, current soil data would be required to characterize the existing exposure conditions. The scope of work for the RI was developed based upon several correspondences between FMC and PADEP, including a meeting with FMC, PADEP and ERM held on December 12, 2014, and was informed by the results of the prior Site investigations. As outlined in the RIWP, the Remedial Investigation included the following tasks to obtain data to supplement the existing site characterization data and to support the completion of the RI/RA Report and a Cleanup Plan:

- Perform comprehensive soil sampling across the Site;
- Vertically delineate the extent of the chlorinated VOC and CS_2 plumes;
- Characterize groundwater in areas that are spatially separated from Site monitoring wells;
- Characterize streambed sediments in the Marcus Hook Creek;
- Characterize liquids within subsurface structures such as sewers, manholes, and tunnels; and
- Determine if subsurface structures are contributing to contamination migration.

3.0 SITE SETTING AND PHYSICAL DESCRIPTION

3.1 SITE LOCATION AND LAND USE

The Site covers approximately 36 acres and is located in Marcus Hook Borough, which is in the southern portion of Delaware County, Pennsylvania as shown on Figure 1. The Site is bounded by East 10th Street to the north/northwest, Marcus Hook Creek to the east, and a Conrail rail line to the southeast and southwest as shown on Figure 2. The Delaware River is approximately one-half mile southeast of the Site.

The surrounding land use is predominantly industrial and commercial mixed with residential areas. Properties immediately surrounding the Site include: an oil refinery to the northeast, east and southeast; commercial use to the south, west and northwest; and residential areas to the north and southwest as shown on Figure 2.

The Site is zoned for mixed/industrial use and is currently used for miscellaneous light industrial/commercial activities, as described in Section 2.1.1.

3.2 BUILDINGS AND STRUCTURES

Portions of the former manufacturing building complex remain, as can be seen on Figure 2, including administration buildings along East 10th Street (Lots 1 through 3), former manufacturing buildings along the northwestern side of the Site (Lots 6, 7, 16, 18), former incinerator building (Lot 13) and portions of the former wastewater treatment plant buildings in the southern portion of the Site (Lot 24). The former buildings in the central portion (Lots 15, 17, 23), southwestern portion (Lots 20 through 22), and eastern portion (Lots 8 through 14) of the Site have been demolished by others after FMC sold the property in 1977. Remnants of the demolished structures, such as foundations, slabs, basements and corridors, as well as demolition debris remain at most of these lots.

Portions of the sewer system installed as part of the historical manufacturing operations, including storm ("clean water") sewers, sanitary sewers, and process ("mill") sewers, still exist at the Site. These sewers are located at depths ranging from approximately 3 to 15 feet below ground surface (ft bgs). In addition, Marcus Hook Borough installed and currently maintains storm sewers along Penn Avenue and a sanitary sewer through the eastern portion of the Site (the sewer depths were not noted on the plans provided by Marcus Hook Borough). The storm sewers discharge to Marcus Hook Creek. The sanitary sewers are tied into the Marcus Hook sanitary main, which connects to the municipal wastewater treatment plant in Chester, PA. The former mill sewers historically discharged to the on-site wastewater treatment plant on Lot 24. Additional subsurface features include portions of former utility corridors and tunnels that are present primarily in the north central portion of the Site. The approximate locations of the sewer network and subsurface utility corridors and tunnels are shown on Figure 4. Investigations of these features is discussed in Section 4.3.

3.3 TOPOGRAPHY

The Site is located in the Delaware River Drainage Basin. The Site is relatively flat and has a topographic relief ranging from approximately 35 feet above mean sea level (AMSL) in the northwest corner to approximately sea level along Marcus Hook Creek. The Site gently slopes down to the southeast toward the top of the creek bank, which has an elevation of approximately 18 feet AMSL.

The remaining former manufacturing buildings and remnant structures, such as foundations, slabs, basements and corridors and Penn Avenue that travels across the Site, interrupt the Site topography.

3.4 GEOLOGY

Site soils include a blend of anthropogenic fill and unconsolidated alluvial gravel and sand with sandy silt, silt and clayey silt. The overburden is underlain by the Wissahickon Formation (schist).

3.4.1 Anthropogenic Fill

Anthropogenic fill material has been placed throughout the Site since it was sold by FMC in 1977. The fill material consists of building debris (asphalt, railroad ties, concrete, brick, wood and metal) from demolition activities conducted after FMC's sale of the Site, coal material/debris (coal, ash, slag, bricks, concrete and asphalt) associated with the former Power House. The anthropogenic material appears to have been placed as fill in demolished building foundations and basements, and areas where subsurface features such as underground tanks had been removed, and generally spread to level the ground surface or as discrete debris piles. In some areas, such as Lot 17, the fill material contains very little unconsolidated soil as compared to other areas, such as Lot 22, where the fill material appears to have been reworked with soil after subsurface features were removed. According to the *Preliminary Removal Assessment Report: Data Collection Summary* (EHRT, January 1991), the area east of Penn Avenue (Lots 9, 10, 11, 14, and 15, along with lots 20, 21, and 23) was graded with several feet of fill circa 1990 by the owner of the property at that time. The source of this fill is unknown.

3.4.2 Unconsolidated Alluvial Soils

The unconsolidated overburden at the Site is mapped as the Trenton Gravel, based on the Pennsylvania Geological Survey map for the Marcus Hook, PA quadrangle (PGS, 1981). This formation consists of gray or pale reddish-brown very gravelly sand interstratified with cross-bedded sand and clay-silt beds. However, this lithology is not noted in the Site overburden in soil borings and monitoring wells. Rather, soil materials consisting of primarily silty sands, silts, and clays containing anthropogenic fill/debris such as brick, concrete, metal, glass, cinders and fly ash predominate as shown on the soil boring logs in Appendix D. The soil boring logs detail the comingled soil and anthropogenic fill/debris or interbedded layers of soil and fill/debris; however, for the purpose of the report these reworked soils are considered to be fill. The soil

grain sizes vary considerably over even short distances such that stratification of soil types resulting from natural deposition is largely absent. The presence of the anthropogenic debris and the wide variation in soil types laterally and with depth suggests extensive re-working of Site soils over time. In general, the Site soil is primarily silt and clay with a relatively low permeability as suggested by slug tests conducted on the overburden wells MW-BS and MW-CS (0.05 ft/day). The overburden thickness at the Site is generally around 20 feet, although it has been observed to vary from 15 to 39 feet below grade. The contact with the bottom of the unconsolidated alluvial soils and the top of bedrock is shown in cross sections included as Figures 5 and 6.

3.4.3 Bedrock

The bedrock at the Site has been identified as the Late Proterozoic-Ordovician-age Wissahickon Formation, which in the area of the Site is identified as an oligoclase mica schist. The upper portions of the bedrock, ranging from the first several feet to 20 feet, are weathered to saprolite. The degree of weathering decreases with depth. The more heavily weathered saprolite closer to the ground surface has been observed to be loose silt, sand or gravel sized particles, typically orange to brown in color. The less weathered saprolite at greater depth often retains some relict bedrock structure but is softer than the competent bedrock and flow along secondary porosity features may be inhibited. Conversely, the more extensively weathered saprolite appears as a granular matrix. This material likely has a somewhat higher degree of primary porosity than does the competent bedrock, such that the saprolite has a relatively higher overall groundwater storage capacity.

Schist, due to the nature of its formation, is metamorphically annealed, and has very little to no primary porosity. As such, ground water flow within competent bedrock occurs exclusively along secondary porosity features including joints and fractures. Since the metamorphic process re-crystallizes the minerals within the rock, flow along any relict bedding planes which may have existed from the schist's former sedimentary nature is not a relevant secondary porosity feature, as evidenced by general drilling observations and downhole geophysics conducted on well MW-I3. Fractures are most abundant near the bedrock surface and are virtually absent deeper than 200 ft bgs, which was confirmed with downhole geophysics in MW-IDD/I3 and also evidenced by the extremely slow recharge rate in MW-I3 (which has not fully recharged in two years).

The borehole for MW-IDD/I3 was logged geophysically before the monitoring wells were constructed. This borehole is the deepest monitoring well known to have been drilled at the Site and extends to a depth of 250 ft. below ground surface. The geophysical logging included caliper measurements, temperature logs, fluid resistivity logs, heat pulse flow, acoustic televiewer and optical televiewer logs. The azimuth of the various fractures are not consistent throughout the borehole and have a range in orientation of 23.56 degrees to 234.98 degrees. Similarly, the dip angles are widely variable, ranging from 12.44 degrees to 69.62 degrees. Consequently, the azimuth and dip do not have a consistent influence to the general flow direction of the groundwater flow in the area of MW-IDD/I3. The findings of the geophysical logging are presented in Section 5.2.1 of this report.

3.5 SITE HYDROGEOLOGY

Groundwater was observed to be present beneath the Site in the overburden soils and within the bedrock. The top of the water table has been encountered at depths ranging from approximately 3 to 25 feet bgs. Depth to water measurements have been collected by FMC since 2004 as shown on Table 3. Seasonal fluctuations were observed, and transient localized mounding of overburden groundwater in less porous soils in response to precipitation infiltration also has been observed. Groundwater flow direction in both the overburden and bedrock are consistent, however, with flow towards the southeast in the eastern portion of the Site (toward Marcus Hook Creek) and generally towards the south in the western portion of the Site (toward Delaware River). Figures 7 and 8 show the groundwater elevation/potentiometric levels and interpreted flow direction in the overburden and bedrock, respectively, based on April 2018 measurements.

The average overburden groundwater gradient ranged from 0.0189 to 0.0226 ft/ft, with an average value of 0.0207 between 2016 and 2018. Given the observed wide variation in soil lithology/type, the overburden groundwater flow is not defined by preferential flow along continuous soil layers of differing hydraulic conductivities, as the soil lithologies are very heterogeneous laterally and vertically. Previous investigations have indicated that tidal fluctuations of the Delaware River have minimal effect on the shallow ground water flow direction at the Site (Foster Wheeler, 2002). The results of a 2010 two-week continuous water level study using pressure transducers indicated that overburden wells L14 MW-6, MW-BS, and MW-CS did not show any tidal fluctuations.

The bedrock groundwater gradient ranges from 0.020 to 0.0228 ft/ft (with an average value over time of 0.0213). As to be expected from material with low porosity and fracturing, both bedrock and overburden wells have very low yields, based on groundwater sampling observations. The occurrence of water-bearing fractures becomes less frequent with depth based on observations from within the wells drilled at the Site. The down-hole geophysics conducted on well MW-I3 allowed for an assessment of the orientation and dip angle of the various fractures encountered. There was no discernible trend in the overall preferential orientation. Although this data set is limited, it suggests there is a lack of a consistent structural grain to the secondary porosity features, such that the direction of anisotropy due to groundwater migration along these features is not necessarily influenced in any specific direction.

The results of the 2010 two-week continuous water level study using pressure transducers indicated the only tidal fluctuation that was observed in a bedrock monitoring well at that time was in MW-CD, which is located approximately 50 feet from Marcus Hook Creek (Appendix A). Wells MW-AD, MW-BD, MW-DD, and MW-LD, which are located 100 feet or more from the Creek, showed no cyclical fluctuations. When the water level data in MW-CD was compared to tide charts from a monitoring station in the Delaware River near the Marcus Hook Creek there was a similar pattern observed between high and low tides and the water level within this monitoring well. For instance, on December 14, 2010 low tide was at 06:40 and high tide was at 13:29. The elevation of the water table within MW-CD rose approximately 0.70 feet during this time period. Conversely, the next low tide on December 14, 2010 was at 18:59 and the

water level in MW-CD fell approximately 0.52 feet. No similar fluctuations were shown at the other wells, and the wells upgradient from MW-CD showed that flow was still in the direction of the creek.

Twelve slug tests (including slug in and slug out) were performed in 2017 in two overburden wells (MW-BS and MW-CS) and four bedrock monitoring wells (MW-AD, MW-BD, MW-DD and MW-LD). The calculated hydraulic conductivity in the overburden ranged from 0.0483 to 0.0920 ft/day with an average of 0.067 ft/day. The calculated hydraulic conductivity in the bedrock ranged from 0.0014 to 0.755 ft/day with an average of 0.47 ft/day (Appendix B). The hydraulic conductivity in the bedrock was observed to decrease with depth. The average hydraulic conductivity of MW-AD, MW-DD and MW-LD wells, which have a total depth of 40 to 52 feet below ground surface had an average hydraulic conductivity of 0.54 ft/day while MW-BD, with a total well depth of 127 feet below ground surface, had a hydraulic conductivity of 0.0014 ft/day.

Vertical gradients at the Site are varied, as shown in Table 15 and Appendix R Figures S-1 and S-2. The following summarizes the observed vertical gradients at the Site:

<u>Vertical gradient between overburden and bedrock -</u>

- The vertical gradient in the vicinity of L01 MW-5 (located in the upgradient, northern portion of the Site) is essentially flat varying slightly between upward and downward.
- The vertical gradient is upward in the vicinity of MW-NS (located along the western Site boundary), and in the vicinity of MW-JS (located in the north-central portion of the Site).
- The vertical gradient along the eastern site boundary, adjacent to Marcus Hook Creek, transitions from flat varying slightly between upward and downward in the vicinity of MW-BS to downward in the vicinity of MW-CS.
- The vertical gradient in the south-central portion of the Site is downward in the vicinity of MW-PS and MW-DS.

<u>Vertical gradient between shallow and deep bedrock</u>

- Bedrock vertical gradients are strongly upward at the MW-C nest along the eastern site boundary with Marcus Hook Creek.
- Bedrock vertical gradients are downward in the south-southwestern portion of the Site in the vicinity of the MW-D nest and MW-F nest, with the exception between MW-DDD and MW-DD which has an upward gradient.

3.6 NATURAL RESOURCES

A desktop analysis was performed to identify any important natural resources on the Site. The desktop analysis was conducted using the National Wetlands Inventory Database (NWI) provided by the United States Fish and Wildlife Service and a query of the Pennsylvania Natural

Diversity Index (PNDI) Environmental Review (ER) tool. An on-site reconnaissance was also performed by a qualified professional.

3.6.1 Wetlands

No wetlands were identified on the Site using the NWI mapping tool or during on-site reconnaissance. According to the Natural Resource Conservation Service (NRCS) Web Soil Survey for Delaware County Pennsylvania, the soil composition at the Site is 100% made land or gravelly materials. Soils classified in this group are well drained and to do not exhibit the characteristics of hydric soil types associated with wetland areas.

3.6.2 Surface Water

Marcus Hook Creek was the only surface water body identified at the Site and flows approximately from north to south creating the eastern boundary of the Site. The creek is mapped as a tidal stream, influenced by its confluence with the Delaware River approximately 2,100 feet south of the Site. Adjacent to the Site, the banks of the Marcus Hook Creek are steep and lined with erosion control features. Marcus Hook Creek is bordered by large industrial facilities as it flows through a highly urban/industrial setting. Stream sinuosity is straight as anthropogenic sources have forced it away from its natural meander. Flow levels in the creek are heavily influenced by a permitted NPDES wastewater discharge from the adjacent refinery. Habitat within the on-Site reach of Marcus Hook Creek is not conducive to supporting a healthy aquatic ecosystem due to high water temperature, which was measured at 91°F in November 2017 approximately 300 feet downstream of the refinery discharge (near the downstream sediment sample location shown on Figure 30), and due to significant urban/industrial storm water runoff and other anthropogenic factors impacting Marcus Hook Creek, which are not related to Site operations. These findings are discussed in the ecological risk assessment in Section 7.4 and Appendix C.

3.6.3 Rare and Endangered Species and Important Natural Areas

To determine potential presence/absence of species of concern, a PNDI assessment was conducted for the Site and is provided in Appendix C. The PNDI ER tool accesses state regulatory agency databases to generate a list of potential threatened or endangered species that may be present within a specified area of concern. Three “sensitive species” were identified by the PNDI ER Tool to potentially occur within the project boundary or the project buffer applied by the review tool (within 0.5 miles of the Site boundary). Further inquiry to the Pennsylvania Fish and Boat Commission (PAFBC) identified the Atlantic sturgeon (*Acipenser oxyrinchus)* (PA threatened), shortnose sturgeon (*Acipenser brevirostrum)* (PA threatened), and the eastern redbelly turtle (*Pseudemys rubriventris*) (PA threatened). These species are discussed further in the ecological risk assessment in Section 7.4 and Appendix C.

4.0 SCOPE OF INVESTIGATIONS

Multiple phases of soil and groundwater investigation have been completed at the Site, including work completed on behalf of USEPA and PADEP in the 1990s and early 2000s (Table 2), and work completed by FMC. The data collected by the USEPA and PADEP were used to guide subsequent investigations, but they were not used to complete the characterization or the risk assessment. In 2004, FMC initiated site investigation activities to address the three specific elements identified in the COA (i.e., characterization of deep groundwater, surface water and sediment in Marcus Hook Creek, and CS_2 contamination in Lot 19). The findings of these activities were presented to PADEP in a *Phase II Site Investigation Report* (ERM, January 2008), interim status progress reports and letters, and during periodic project status meetings.

In 2015, FMC initiated a comprehensive site-wide remedial investigation to obtain data to supplement the existing site characterization data and to more broadly characterize current Site conditions. The work completed as part of this investigation is summarized below, as well as a recap of the 2010 soil investigation and the investigation of the former CS_2 storage moat area. The results of the 2010 soil investigation and the investigation of the former CS_2 storage moat area, as well as historical facility information and conditions, were used to inform the scope of the comprehensive site-wide remedial investigation and to provide additional information that further supports the conceptual site model; however, per PADEP request made during a December 2014 meeting, this older data was not used to complete quantitative site characterization and risk assessment.

4.1 SOIL INVESTIGATIONS

Over four hundred soil samples were collected during FMC remedial investigations from 2004 to 2017. The locations of FMC's soil sample locations are shown on Plate 1 and Plate 2 and are summarized on Tables 5, 7, 8 and 9. All of the FMC data were collected in accordance with PADEP approved Work Plans. Soil samples were analyzed for VOCs, SVOCs, Metals, PCBs, asbestos as well as several organic compounds that were reportedly used during historical operations, as summarized in Section 4.1.3. Not all of the regulated substances were analyzed in each sample since some of the sampling was targeted for specific Compounds of Concern (COCs) due to the area of investigation or if the sample was collected for delineation of a specific COC.

Soil sampling results were compared against the non-residential MSCs for direct contact and soil-to-groundwater pathways. Unsaturated soil samples were compared to the soil vapor intrusion screening values, since saturated soils were evaluated by screening the groundwater data. The following sections presents the soil data in relation to specific investigations.

Former Carbon Disulfide Storage Moat Investigation

The former CS_2 storage moat area on Lot 19 and Lot 16 utilized three CS_2 storage units at various times when the facility was in operation. Initially, two USTs on southwestern portion of Lot 16 were replaced with a historical storage moat with five vaults located on the southeastern portion of Lot 19. Investigation in this area demonstrated that the USTs and storage moat were removed and replaced by the former CS_2 storage moat located in the southwestern portion of Lot 19. This moat was the only unit present when the facility stopped operations in 1977. FMC closed in place this storage moat in 1981.

FMC advanced 28 soil borings and collected 82 soil samples for VOC analysis in the former CS_2 storage area in 2004, 2005 and 2016 to determine if this area was a continuing source of CS_2 to groundwater downgradient of Lots 16 and 19. Sample locations and analytical results are summarized on Figure 9. Two cross sections of the former CS_2 moat area, showing the soil types below and surrounding the moat area, are presented in Figures 10 and 11.

2004-2005 Carbon Disulfide Storage Moat Investigation Activities

FMC conducted the initial investigation in 2004 and 2005 to evaluate a potential CS_2 source. Samples of the surface and subsurface soil were collected from the perimeter of and below the former CS_2 storage moat during this soil boring investigation. Samples were also collected from the material contained within the structure. The investigation was performed in accordance with the scopes of work presented in the *Phase II Site Investigation Work Plan*, dated March 9, 2004 (ERM, 2004) and *Work Plan for CS_2 Source Area Investigation*, dated September 27, 2005 (ERM, 2005), and as summarized below. This investigation also included a review of historical operations and closure records.

The former CS_2 storage moat was comprised of ten 17,000-gallon steel tanks each contained inside separate, adjoining, open-topped concrete vaults, as shown on Figure 12. The dimensions of the entire moat structure are approximately 50-feet wide by 60-feet long by 13-feet deep. When the former CS_2 storage moat was operational, each CS_2 tank was submerged in water inside each vault in order to suppress/contain CS_2 vapors in the event of a leak. Because CS_2 is heavier than water, any CS_2 that may have leaked from a tank would accumulate in the bottom of the vaults. Based on review of historical facility documents, closure of the former CS_2 storage moat in 1981 included: the water was removed from each vault, each tank was emptied of CS_2, a portion of the top of each tank was cut off, sludge at the bottoms of the vaults and tanks were stabilized with fly ash, then each tank and each vault were filled with concrete. The top of the entire former CS_2 storage moat was then capped with a concrete slab that is visible at the ground surface today.

In 2004, 15 soil borings were advanced in the vicinity of the storage moat as shown on Figure 9. Soil borings were completed using direct-push technology and a continuous Macrocore® sampling device. Two or three soil samples were collected from each boring, including a surface soil sample (0-2 ft. bgs), one immediately above the inferred water table, and one at a mid-depth (biased towards visually impacted soil or elevated photoionization detector [PID] readings). Forty-eight (48) soil samples were collected in a manner consistent with EPA Method

5035, and submitted to Lancaster Laboratories Inc. (now called Eurofins Lancaster Laboratories; herein "Eurofins") for analysis of TCL VOCs by Method 8260B.

An additional investigation was performed in 2005 to characterize materials in the moat and the soil and groundwater quality directly beneath the former CS_2 storage moat. Three borings (Lot 19 SB-20, Lot 19 SB-21, and Lot 19 SB-23, Figure 12) were advanced using sonic drilling methods into the vaults. Cores were collected continuously in 10-foot intervals. Boring SB-20 was drilled through the northwest corner of the former CS_2 storage moat to the top of competent bedrock at a depth of 26 feet. After purging collected water, a groundwater sample was collected from SB-20. Borings SB-21 and SB-23 were drilled in the central and southern edges of the former CS_2 storage moat, respectively. Competent bedrock was encountered in boring SB-23 at a depth of 29.5 feet. Boring SB-21 was terminated at the bottom of the former CS_2 storage moat at a depth of 13 feet.

Three samples were collected from SB-20 and SB-23, and two from SB-21. In SB-20, one sample was collected from the waste/fly ash material inside the vault, one directly beneath the vault, and one from the soil at the top of bedrock. In SB-21, two samples were collected from the material inside the vaults, one from an area of high PID readings in the vault (6 feet bgs) and the other from the bottom of the boring. In SB-23, one sample was collected from the material inside the vault at the bottom, one from an area of high PID reading beneath the vault (17 feet) and one from the soil at the top of bedrock. The samples were collected using Encore samplers consistent with Method 5035. The samples were submitted to Eurofins for analysis of CS_2 via method SW-846 8060B/5035.

2016 Carbon Disulfide Storage Moat Investigation Activities

In 2016, a comprehensive soil boring investigation on Lots 16 and 19 was completed. Ten soil borings were advanced in the vicinity of the former CS_2 storage moat during this investigation and 26 soil samples were collected as shown on Figure 9. The soil borings were advanced to the top of the water table, or to refusal. The results of this investigation are presented in Section 5.1.1 and boring logs are provided in Appendix D.

2010 CVOCs Soil Investigation

FMC conducted a soil investigation in 2010 to identify potential sources of chlorinated volatile organic compounds (CVOCs) found in groundwater. The investigation included a soil gas investigation using Gore-Sorber® modules and follow-up soil sampling based upon the result of the soil gas survey. The investigation was performed in accordance with the scope of work presented in FMC's October 9, 2009 letter to PADEP and as summarized below.

The Gore-Sorber® survey was completed in August 2010. The Gore-Sorber® modules were installed in soil gas points that extended to approximately three ft bgs. Sample points were located in an approximately 50 foot grid over the eastern half of the Site, with the exception of paved or building areas as shown on Figure 14. The survey area encompassed portions of Lots 9, 10, 11, 12, 13, 14, 15, 17 and 23. These areas were selected to evaluate the areas surrounding the two former spray ponds (on Lots 9, 10, 11 and 13); areas near and upgradient

of the MW-D well nest (Lots 14, 15 and 17); portions of Lot 23 upgradient of the MW-B well nest; and east of Lot 18, portions of which were used as a former machine shop and pipe shop. Seventy-three (73) modules were placed into the boreholes and left in the ground for between 9 and 16 days, then retrieved and sent to Gore's laboratory in Elkton, Maryland. The modules were analyzed for VOCs by a modified Method 8260.

The Gore-Sorber® survey identified areas of CVOC concentrations for further evaluation, including: 1,1-dichloroethene (1,1-DCE) on Lots 1 and 12; trichloroethene (TCE) on Lots 1, 17; trichloroethane (TCA) on Lots 1, 10, 11 and 17; tetrachloroethene (PCE) on Lot 17; and carbon tetrachloride on Lots 10, 12 and 17. To quantify CVOC concentrations in these areas, soil samples were collected in November 2010. Twenty-eight (28) of 30 proposed soil borings were completed as shown on Figure 15. (Note: ESB-16 and ESB-17 were proposed but not installed or sampled because they were located above a former basement that was open and it was unsafe to advance the two boreholes). Soil borings were completed using direct-push technology and a continuous Macrocore® sampling device. Borings were advanced to the top of the groundwater table, bedrock, or to 20 feet bgs which ever occurred first. The soil cores were screened with a PID and a visual description of the soil cores was recorded in a field notebook. The soil interval with the greatest indication of potential contamination (e.g., elevated PID) was selected for analysis. Twenty-eight (28) samples were collected in a manner consistent with EPA Method 5035, and submitted to Eurofins for analysis of Target Compound List (TCL) VOCs by Method 8260B.

The results of this investigation are presented in Section 5.1.2, and the soil boring logs are provided in Appendix D.

2015-2016 Comprehensive Site-Wide Soil Investigation

FMC completed a comprehensive soil investigation in 2015-2016. The investigation was performed in accordance with the RIWP, as summarized below.

One hundred two (102) borings were completed as shown on Figure 13, Plate 1, and Plate 2, and 258 soil samples were collected for analysis. The borings were located across the Site, with more samples collected in areas where historical soil samples had reported concentrations above the PA Act 2 MSCs, where the 2010 soil vapor investigation indicated potential impacts, and in areas where more chemically intensive manufacturing operations were historically performed.

Soil borings were completed using direct-push technology using a continuous Macrocore® sampling device, and advanced to the top of the groundwater table, bedrock, or to refusal. The soil cores were screened with a PID and a visual description of the soil cores was recorded in a field notebook. Where possible, three soil samples were collected from each soil boring location; however, subsurface features such as foundations prohibited advancing some soil borings to completion. In such cases, a surficial soil samples from 0 – 1 foot bgs was collected, at a minimum, to allow for evaluation of direct contact risk under non-residential scenarios. Where possible, the three soil samples were collected from each boring from the following depth intervals:

- Surface soil - 0-1 foot depth interval;
- Intermediate soil zone - where PID readings or visual impacts such as debris/fill or staining indicated potentially impacted soil; and
- Deeper soil - 1 foot above the top of groundwater table or top of bedrock, whichever was encountered first.

The soil samples were analyzed for TCL VOC and SVOC, Total Analyte List (TAL) metals, PCBs, asbestos, as well as several organic compounds that were reportedly used during historical manufacturing operations at the Site (listed below). Samples were analyzed using the following methods:

- TCL VOCs – SW-846 8260
- TCL SVOCs – SW-846 8270
- PCBs – SW-846-8082
- mercury – SW-846 7470
- cyanide – SW-846 9012
- other TAL Metals – SW-846 6010
- asbestos – PLM Carb 435 Level A (400 Point Count)
- Organic compounds reportedly used during historical manufacturing operations (butyl alcohol – SW-846 8260, butyl acetate – SW-846 8260, ethyl alcohol – SW-846 8260, ethyl acetate – SW-846 8260, tetrahydrofuran – SW-846 8260, ethylene glycol – SW-846 8015)

Quality assurance (QA) samples were also collected as described in the RIWP. All samples were submitted to Eurofins for analysis.

2017 Additional Surface Soil Sampling

In 2017, additional surface soil sampling was performed to better characterize areas for which soil samples collected in 2015-2016 had reported concentrations above Non-Residential Direct Contact MSCs. The additional sampling was performed in accordance with the scope of work presented in FMC's December 2, 2016 letter to the PADEP, as amended in FMC's February 16, 2017 letter, and as summarized below.

Forty (40) surface soil samples were collected in April 2017 as shown on Figure 13 and Figures 16 through 22. Samples were analyzed only for the constituent(s) that were reported above Non-Residential Direct Contact MSCs in the corresponding initial sample. Based upon the reported results for the samples collected in April, an additional 19 "step-out" samples were collected in July 2017 to further refine the characterization in Lots 4, 15, 17, 21 and 22, as shown on Figures 16, 18, 19, 20, and 21.

In October 2017, additional sampling was performed to refine the characterization of lead impacted soils in Lot 15. An x-ray fluorescence (XRF) field screening analysis was performed to assist in determining where lead concentrations in surface soils were likely below the non-residential direct contact (0-2 ft. bgs) MSCs. Based on the results of the field screening, five

surface soil samples were collected and sent to Eurofins for analysis of lead by method SW-846 6010. The verification soil sampling points are shown in Figure 18. The results of this sampling are presented in Section 5.1.5 and soil boring logs are presented in Appendix D.

4.2 GROUNDWATER INVESTIGATION

FMC has conducted 19 groundwater sampling events since 2004, including eight quarters of sampling in 2007-2009 and eight consecutive quarters of sampling in 2016-2018. The original scope of investigation was presented in the March 2004 *Phase II Site Investigation Work Plan* (ERM 2004); additional scopes of work were presented in FMC's October 9, 2009 letter to PADEP and the RIWP. The work was completed in accordance with these plans, and as summarized below:

- 2004 – installed four overburden wells (MW-AS, MW-BS, MW-CS, MW-DS) and six bedrock monitoring wells (MW-AD, MW-BD, MW-CD, MW-DD, MW-FD, MW-GD)
- 2006 – installed four bedrock wells (MW-05D, MW-ED, MW-HD, MW-ID)
- 2010-2011 – installed one overburden well (MW-JS) and six bedrock wells (MW-CDD, MW-DDD, MW-LD, MW-MD, MW-JD, and MW-KD)
- 2016 – installed two overburden wells (MW-NS and MW-PS) and seven bedrock wells (MW-C3, MW-D3, MW-FDD, MW-IDD, MW-I3, MW-ND and MW-PD).

The current Site monitoring well network includes 40 wells (17 overburden wells and 23 bedrock wells) as shown on Figure 23. Well construction information is summarized on Table 4 and well logs are presented in Appendix E. FMC was not able to locate well logs for five of the 10 wells installed by others before 2003, but performed downhole video logging in February 2019 to determine the elevation of the top and bottom of the screen. [note: In February 2019, at the time the video logging was performed, the inner and outer stickup casing of MW-09 West was found broken off at ground surface. This damage occurred sometime between October 2018, when FMC last observed this well, and February 2019 when FMC performed the video logging. The damage does not affect the results and conclusions presented in this RI/RA Report.]

4.2.1 Overburden Well Installation

Overburden wells (MW-AS, MW-BS, MW-CS, MW-DS, MW-JS, MW-NS, and MW-PS) were advanced to the overburden/bedrock interface (approximately 20-40 feet bgs) using hollow stem auger, core, and/or air rotary drilling methods. Bedrock was encountered at a maximum depth of 40 feet bgs.

For each of the overburden wells, a six-inch diameter borehole was advanced to the target well depth. The wells were constructed of two-inch diameter Schedule 40 PVC with 10 feet of 0.010-inch slotted PVC well screen. The well annulus was filled with No. 1 sand, from the bottom of the well to approximately two feet above the screened interval. A minimum two-foot thick bentonite seal was placed above the sand pack and the remaining annulus was

tremie-grouted to ground surface. A six-inch diameter, protective outer steel casing with a locking cap and a concrete collar was installed around the well.

4.2.2 Bedrock Well Installation

Three deep wells (MW-AD, MW-BD, and MW-CD) were installed using a combination of mud rotary and air hammer drilling methods. Thirteen wells (MW-5D, MW-CDD, MW-C3, MW-DDD, MW-D3, MW-IDD, MW-I3, MW-JD, MW-KD, MW-LD, MW-MD, MW-ND, and MW-PD) were installed using air rotary methods. For health and safety considerations, wells MW-DD, MW-ED, MW-FD, MW-GD, MW-HD and MW-ID were installed using only mud rotary due to the potential for encountering CS_2 -affected groundwater. The drilling mud, which completely fills the borehole during drilling, served to suppress potential CS_2 vapors. For health and safety reasons and to minimize investigation derived waste a Sonic well drilling method was used to install MW-FDD.

The bedrock wells, with the exception of MW-5D, MW-FD, and MW-GD, were completed as two-inch diameter screened wells. Wells MW-5D, MW-FD, and MW-GD were completed as open borehole wells due to the very low yields encountered in these wells and the concern that installing well screens would exacerbate their low yield and present problems during sampling and water level gauging.

The bedrock wells were installed by advancing a 4-, 6-, 8-, 10- or 12-inch diameter borehole through the overburden and into competent bedrock. A 4-, 6-, 8- or 10-inch steel casing was installed into the competent bedrock and tremie grouted from the ground surface to the bottom of the casing. After the grout was given sufficient time to cure, the boreholes were advanced into bedrock using air hammer and/or mud rotary drilling methods.

The bedrock wells, except MW-FD, MW-GD, and MW-5D, were constructed of 2-inch ID, schedule 40, PVC riser and 0.010-inch slot screen. The annulus of each well was filled with No. 1 sand to 2 feet above the screen, and a 1-foot thick bentonite plug was placed above the sand pack. The remaining annulus was filled with bentonite-cement grout to the ground surface. A protective outer steel casing with a locking protective cap and a concrete collar was installed around each well.

Wells MW-FD, MW-GD, and MW-5D were constructed as open borehole monitoring wells. For these wells, a steel casing was first installed into competent bedrock and tremie grouted in place (8-inch casings for MW-FD and MW-GD and a 10-inch casing for MW-5D). After the grout was allowed to cure, the borehole was then advanced to the target depth, and all three wells were completed as open boreholes.

4.2.3 Groundwater Sampling

FMC has conducted 19 groundwater sampling events since 2004. Groundwater sampling was performed in accordance with the *Phase II Site Investigation Work Plan*, and as summarized below.

Water Level Measurements

Synoptic groundwater level measurements were collected at the start of each sampling event to obtain data to evaluate hydraulic gradients and the direction of groundwater flow. Water level measurements are provided on Table 3 and the overburden water table and bedrock potentiometric surface from the April 2018 groundwater sampling event are shown on Figures 7 and 8. All water table/potentiometric surface maps from the recent eight consecutive quarters of groundwater sampling are provided in Appendix G.

Low Flow Well Purging

The wells were purged prior to sampling, in accordance with USEPA Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures (EPA/540/S-95/504, April 1996). The wells were purged using a positive displacement pump (QED bladder pump) capable of purge rates less than 0.5 liters per minute (L/min). The pump intake was set at the midpoint of the screened interval of each well.

The wells were purged at a flow rate between 0.2 L/min and 0.5 L/min and water levels were monitored during purging to verify little or no drawdown (<0.3 feet) occurred in the well. Field indicator parameters were monitored during purging using an in-line, YSI Multi-Parameter Water Monitoring Instrument with a flow-through cell. Field indicator parameters, including temperature, pH, specific conductivity, oxygen-reducing potential (ORP), dissolved oxygen, and turbidity were recorded at five minute intervals. Purging was considered complete when the indicator parameters stabilized for three consecutive readings in accordance with the following criteria:

- ± 1°C for temperature,
- ± 0.1 for pH,
- ± 3% for conductivity,
- ± 10 mV for ORP,
- ± 10% for dissolved oxygen, and
- ± 10% for turbidity (unless < 10 NTU).

Sample Collection

After the field parameters stabilized, the flow-through cell was bypassed and samples were collected directly from the pump discharge tubing to minimize disturbance to the well. Samples were collected into clean, laboratory-supplied (pre-preserved, as appropriate) containers in the following order: VOCs, SVOCs, PCBs, and metals. Prior to filling the bottles for metals analysis, the water was filtered through 0.45-micron filter and then placed in the laboratory-preserved sample bottle. Immediately after sample collection, each sample bottle was sealed in an individual plastic bag and placed in a cooler containing sufficient ice to maintain sample temperatures at or below 4°C without freezing the samples.

During each groundwater sampling event, the following samples were obtained for QA/QC purposes: one equipment blank and one trip blank per day.

Sample Analysis

The groundwater samples were submitted to Eurofins and analyzed for the following compounds by SW-846 methods:

- TCL VOCs,
- TCL SVOCs,
- PCBs, and
- dissolved TAL metals.

Beginning in 2016, wells were also analyzed for ethanol, ethyl acetate, n-butyl acetate, n-butyl alcohol, and tetrahydrofuran, which were identified as compounds used during the former cellophane manufacturing operation.

On June 29, 2017 FMC provided a letter to PADEP stating that FMC intended to reduce the suite of analysis for upcoming quarterly groundwater monitoring events. The reduced suite of analysis included TCL VOCs and ethanol, ethyl acetate, n-butyl acetate, n-butyl alcohol, and tetrahydrofuran; TCL SVOCs; and dissolved TAL metals. PCB and cyanide analysis were removed because these compounds had not been detected in any groundwater samples to date. This reduced suite of analysis was initiated during the August 2017 quarterly groundwater sampling event.

During the April 2018 groundwater sampling event, samples from eight wells (L01-MW-5D, MW-AD, MW-JS, MW-ND, MW-ID, MW-BD, MW-CD and MW-DD) were also analyzed for Total Sulfide, Total Sulfate, Total and Dissolved Iron and Manganese, Alkalinity, Total Dissolved Solids, and TOC as summarized on Table 6. These additional parameters were collected to support the development of the conceptual site model as discussed in Section 6.0

All groundwater samples and QA/QC samples were submitted to Eurofins for analysis. The results of the groundwater sampling are presented in Section 5.2.

4.3 SUBSURFACE STRUCTURE INVESTIGATION

In 2001, as part of its Phase I Site Investigation, PADEP collected solids and water samples from 15 subsurface structures at the Site (sewers, tunnels, basements). The results of this sampling, which were summarized in the *Technical Direction Memorandum #3 Task 3.6 – Underground Gallery, Tunnel, and Subsurface Structure Investigation* (Foster Wheeler, January 10, 2002), indicated that solids samples collected within four of these 15 structures contained constituents above non-residential direct contact (0-2 ft. bgs) MSCs for organic and/or inorganic regulated substances in soil. The samples collected from the 11 other subsurface structures did not contain constituents concentrations that exceeded their respective non-residential direct contact (0-2 ft. bgs) MSCs. The four structures were included as part of the Interim Response under the COA. FMC removed impacted materials from the four identified structures during its Interim Response action in 2004-2005 and documented these activities in the *Interim Response Final Report* (ERM, 2006).

During the development of the RIWP, PADEP requested that FMC further evaluate whether the sewers, manholes, and tunnels are potentially affecting contaminant migration. The scope of work as described in the RIWP included:

- Review of historical documentation to identify optimal sampling locations for each type of sewer and substructure;
- Site reconnaissance to verify the location and accessibility of the candidate subsurface structures; and
- Solids and water sampling from safely accessible subsurface structures.

FMC performed the historical document review and visual reconnaissance of the subsurface structures that were accessible to identify subsurface structures that were suitable candidates to sample. FMC presented to PADEP the reconnaissance findings and proposed sample locations in a letter dated December 2, 2016, as amended by FMC's February 16, 2017 Response to Comments letter. The purpose of the sampling was to characterize water in basements and manholes for the remedial investigation. The sampling scope included the collection of water samples from three flooded building basements on Lots 2, 6 and 24 and the collection of water samples from nine manholes that were associated with the Site's clean water, sanitary and mill waste sewer lines. There was not sufficient solids present within the basements or manholes to permit solid sample collection from the ground surface (for safety reasons, confined space entry into manholes or other structures was not performed). FMC completed the basement water and sewer system water sampling activities in March and April 2017.

Basement water samples were collected as proposed in FMC's February 16, 2017 letter to the PADEP from two of the three basements as shown on Figure 24. FMC contacted the owners of Lots 2, 6 and 24 to obtain their permission to access the buildings on their Lots for the purpose of collecting samples. FMC received permission from the owners of Lot 2 and Lot 6 to access and collect samples from their respective basements. At the time of sampling, the basement on Lot 2 contained approximately 2 to 3 feet of standing water and the basement on Lot 6 had approximately 6 to 8 inches of water in a floor trough allowing a sample to be collected. A sample could not be collected from the basement of Lot 24 since the owner of the lot was non-responsive to allow FMC access.

Sewer manhole water samples were collected as proposed in FMC's February 16, 2017 letter to PADEP at nine manholes. The nine manholes that were sampled are as follows and as shown on Figures 25, 26, 27, and 28:

Clean water sewer manholes:	Former mill waste sewer manholes:	Sanitary sewer manholes:
C11 on Lot 6	M6 on Lot 6	S15 on Lot 11
C21 on Lot 13	M10 on Lot 19	S28 on Lot 18
C30 on Lot 23	M21 on Lot 23	
	M26 on Lot 17	

The results of the basement and sewer manhole reconnaissance and sampling are presented in Section 5.3.

4.4 VAPOR INTRUSION INVESTIGATION

FMC performed two investigations to assess the potential vapor intrusion (VI) risk at the Site. The first investigation was conducted in 2004-2005 to evaluate the potential for VI near the former CS_2 storage moat. The second investigation was conducted in 2017-2018 to assess the potential VI and preferential pathway concern associated with impacted groundwater near overburden monitoring wells MW-DS and MW-JS.

4.4.1 2004 - Former Carbon Disulfide Storage Moat Area

The CS_2 concentrations reported for two samples collected from a boring in Lot 19 in 2004 exceeded the USEPA-PA Volatilization to Indoor Air Standard, which was the standard that was referenced in the PADEP Vapor Intrusion Guidance (2004) at the time. To evaluate the potential for CS_2 vapors in the soil gas to adversely impact the nearby one-story office building on Lot 19, FMC installed two soil gas piezometers (SG-1 and SG-2) within five feet of the office building and collected soil gas samples from these points for CS_2 analysis. The locations of SG-1 and SG-2 are depicted on Figure 9. Access for the soil gas piezometers adjacent to the office building was limited by the presence of propane storage tanks next to the building, an air conditioning unit and associated underground electric lines, and the location of the underground former CS_2 storage moat itself. The sampling was performed consistent with the supplemental scope of work outlined in correspondence submitted to PADEP on September 23, 2004, and as summarized below.

The soil gas piezometers were installed in the following manner:

- Using a truck-mounted, direct-push sampler, a pilot borehole was first advanced to enable logging of the subsurface lithology to aid in the placement of the soil gas piezometer. Following logging, a stainless-steel soil gas piezometer was installed to a depth of 3.5 feet bgs at SG-1 and SG-2.
- The annulus of the piezometer was then backfilled with silica sand, followed by a 0.5 foot layer of bentonite chips. The remaining annulus was backfilled with cement/bentonite grout to the ground surface and a flush-mount manhole was installed over the piezometer.

The soil gas piezometers were installed to a depth of 3.5 feet bgs due to the observation of groundwater in the borings at 4 feet bgs.

Two rounds of soil gas samples were collected from the sampling points; one round on December 14, 2004 and a second on February 10, 2005. The February sample was collected when the ground was frozen, as recommended by the PADEP guidance at the time. The samples were collected using summa canisters and then shipped to Eurofins for CS_2 analysis via method TO-15. The results are presented in Section 5.5.1.

4.4.2 2017-2018 VI Investigation

An updated VI assessment was prepared in accordance with the requirements of the Pennsylvania Code Chapter 250 (25 PA Code §250) and PADEP's *Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under Act 2*, January 18, 2017 (VI Technical Guidance). Evaluation of potential VI sources including using the alternative assessment option for soil gas was completed based on the potential source area identified by the two overburden wells (MW-DS and MW-JS) that had concentrations of regulated substances of VI concern that were at reported levels that exceeded the corresponding groundwater MSCs. None of the other overburden wells had detections that exceeded the non-residential PADEP Groundwater MSCs. The groundwater results are presented in Section 5.0.

As shown on Figures 25, 26, 27 and 28, there are various current and former underground utilities at the Site, some of which are located within 30 feet of the two overburden wells MW-DS and MW-JS. Although the presence of bedding material in the vicinity of these utilities cannot be confirmed, these utilities were treated as potential migration pathways. Due to the presence of potential migration pathways within 30 feet of the reported exceedances of the groundwater MSCs, and consistent with PADEP's "VI Technical Guidance", two rounds of near-source soil gas samples were collected from four sampling locations. The near-source soil gas samples were collected consistent with the approach described in FMC's December 5, 2017 email to Dustin Armstrong of the PADEP, and as summarized below.

Four semi-permanent soil gas sampling points were installed in December 2017 - two in the MW-DS area and two in the MW-JS area, as shown on Figure 29. The points were installed to depths of 8 - 11 feet bgs. All four sampling locations were installed within 30 feet of the identified utilities to further evaluate the potential VI risk. Sample point depths were advanced to approximately 1 foot above the estimated water table capillary fringe at the time of installation, based on the measured groundwater levels in MW-DS and MW-JS. Capillary fringe thickness was determined from Appendix C, Table C-1 of the *VI Technical Guidance*, and groundwater elevations were verified the day of sample collection. Semi-permanent sampling points were constructed with a 6" metal screen attached to Teflon tubing. Sand was placed around the screen and hydrated bentonite was used to seal the annular space of the borehole. Helium tightness testing was completed on each of the four points and results showed satisfactory sealing around each.

Near-source soil gas samples were collected using 6-L Summa Canisters, set with a flow rate of 50 mL/min. Initial near source soil gas samples were collected on December 18, 2017. The second round of near source soil gas sampling was attempted on February 2, 2018. However, elevated water table conditions prevented the ability to collect samples from the two points near MW-JS and one of the points near MW-DS (the points were likely vapor locked since the soil gas point screens were now below the water table, and vapor from the point could not be drawn into the Summa canister). As a result, only one soil gas sample (ERM-MW-DS-VP-2) was able to be collected during this mobilization.

Groundwater levels remained high through February and March 2018, so on April 9, 2018 temporary soil gas points were installed within two lateral feet of the original sampling points,. The temporary points were installed using a direct push (Geoprobe ®) drill rig and were advanced to approximately one-foot above the estimated capillary fringe based on the observed water levels in MW-DS and MW-JS (8-10 feet bgs). Teflon tubing was placed at the desired depth of the inner rods, and the annular space was sealed with hydrated bentonite. The points were then purged.

Samples were collected from the temporary points near MW-DS on April 10, 2018; however, samples were unable to be collected from the MW-JS points due to elevated water table and apparently a very thick capillary fringe. Therefore, on April 30, 2018, temporary points were reinstalled near the MW-JS location to depths of 4 feet using a direct push (Geoprobe ®) drill rig and sampled.

Based upon the groundwater analytical data, soil gas samples from the MW-DS area were analyzed for the parameters exceeding MSCs in groundwater) by method TO-15. For MW-DS, these included TCE, PCE and 1,2,4-TCB, and for MW-JS these included 1,1-DCE and TCE. Summa canisters and sample analysis was provided by Eurofins. Results of this sampling are summarized in Section 5.4.2.

4.5 MARCUS HOOK CREEK INVESTIGATION

FMC conducted two investigations of the sediments in Marcus Hook Creek. Both investigations were completed at the request of the PADEP.

4.5.1 2004 Marcus Hook Creek Investigation

FMC collected sediment samples from Marcus Hook Creek in 2004. At the request of PADEP, the samples were collected from the 1-2 foot and the 2-3 foot depth intervals below the creek bed to supplement shallow sediment samples that were collected during PADEP's prior 2001 investigation. The results of this previous investigation showed that there were several inorganic and organic constituents detected in the shallow (0-6 inch) interval as documented in *Final Phase I Site Investigation Report (*Foster Wheeler*, 2002*). The sampling was performed in accordance with the *Phase II Site Investigation Work Plan* (ERM, 2004), and as summarized below.

Sediment samples were collected from three locations in the streambed of Marcus Hook Creek: near the upstream end of the Site on the south side of the East Tenth Street Bridge; at approximately midstream (just upstream of refinery wastewater discharge outfall); and downstream of the Site, just north of a railroad bridge, as shown on Figure 30. The sediment samples were submitted to Eurofins and analyzed for TCL VOCs, TCL SVOCs, pesticides, PCBs and TAL metals, and the results were presented in the *Phase II Site Investigation Report* (ERM, January 2008) and are included as Table 14.

The *Phase II Site Investigation Work Plan* also included stream flow measurements and surface water samples that would be collected from the creek. However, in consideration of the fact that the creek is tidal and the refinery wastewater discharge contributes a considerable portion of the flow, as well as thermal loading, it was determined that stream flow measurements and water quality measurements would not provide meaningful data to characterize Site conditions.

4.5.2 2016 Marcus Hook Creek Investigation

In 2016, FMC collected four surface streambed sediment (0 – 6 inches) samples to characterize the current shallow sediment quality in Marcus Hook Creek. The samples were collected in accordance with the RIWP and as summarized below. The 2016 shallow sediment samples were collected in approximately the same locations as the three sediment samples collected in 2004, with the fourth sample collected adjacent to Lot 9 as shown on Figure 30.

The samples were analyzed as follows:

- VOCs – SW-846 8260
- Butyl Alcohol – SW-846 8260
- Butyl Acetate – SW-846 8260
- Ethyl Alcohol – SW-846 8260
- Ethyl Acetate – SW-846 8260
- Tetrahydrofuran – SW-846 8260
- Ethylene Glycol – SW-846 8015
- SVOCs – SW-846 8270
- PCBs – SW-846-8082
- Mercury – SW-846 7470
- Cyanide – SW-846 9012
- Other TAL metals – SW-846 6010

The results from these samples are summarized in Section 5.5 and Section 7.

In November 2017, the in-stream water temperature (91°F) was recorded approximately 300 feet downstream of the refinery wastewater discharge, near the downstream sediment sample location shown on Figure 30.

5.0 RESULTS AND FINDINGS

The analytical data received from the laboratory were reviewed for completeness and the laboratory notes and qualifiers were reviewed to evaluate data usability or potential quality concerns to consider (e.g., "B" flagged data, etc.). There were no data usability issues or material quality concerns identified with the analytical data received from the laboratory, so all data are considered acceptable for use in remedial decision making.

All samples were compared to the applicable PADEP Act 2 non-residential MSCs, revised August 2016, and the Vapor Intrusion Screening Values, revised November 2016. The results are discussed below.

5.1 SOIL

The following presents the soil data in relation to the various investigations completed at the Site by FMC since 2004. Soil sample analytical data was compared to the PADEP Act 2 non-residential MSCs direct contact MSC, the non-residential soil-to-groundwater MSC and the SV_{SOIL}. The data is summarized in Section 5.5 and on Table 5, 7, 8 and 9, Figures 15-22 and Figures 31-33.

As previously noted, the results from the 2004-2005 and the 2010 investigations were used to inform the scope of the comprehensive remedial investigation completed in 2015-2017 and to support the conceptual site model; the results from the 2015-2017 comprehensive remedial investigation are used to fully characterization the site, inclusive of those areas investigated in 2004-2005 and 2010, and complete the risk assessment.

5.1.1 Former Carbon Disulfide Storage Moat Area

As discussed in Section 4.1.1, FMC investigated the former CS_2 storage moat area in 2004-2005 and 2016 to determine if this area was an active source of CS_2 in the groundwater downgradient of Lots 16 and 19. The following sections presents the results of these investigations.

5.1.1.1 2004-2005 Investigation

During the 2004-2005 investigation, three borings (SB-20, SB-21 and SB-23) were advanced into the moat structure and 17 borings (Lot 16 SB-4, SB-5, SB-6, SB-7, SB-8 and SB-9; Lot 19 SB-1, SB-2B, SB-3, SB-10, SB-11, SB-12, SB-13, SB-15, SB-17, SB-18, SB-19) were advanced around the perimeter of the moat structure. The results of this investigation were presented to PADEP in the *Phase II Site Investigation Report* (dated January 2008) and are summarized below. The location of these borings are shown on Figure 9 and the results are summarized on Table 5.

Samples were analyzed for VOCs. Other than CS_2, no VOCs were reported at concentrations above direct contact or soil-to-groundwater MSCs. Samples of the surface and subsurface soil

collected from the perimeter of the former CS_2 storage moat area contained relatively low concentrations of CS_2. All soil samples were below the non-residential direct contact MSC, and with the exception of one soil boring, Lot 19 SB-10, all soil samples were below the non-residential soil-to-groundwater MSC (Table 5). Boring Lot 19 SB-10, located just beyond the northwest corner of the former storage moat, contained CS_2 at 8 and 12 feet bgs at 280 and 660 mg/kg, respectively (the soil-to-groundwater MSC is 620 mg/kg). Subsequent delineation samples collected from near Lot 19 SB-10 contained CS_2 concentrations well below Act 2 standards, indicating the CS_2 detection above the soil-to-groundwater MSC on Lot 19 is very localized.

The following describes the results of the borings completed through the moat structure. Boring SB-20 was drilled through the northwest corner of the former CS_2 storage moat to the top of competent bedrock (26 ft bgs). This location was chosen due to the elevated CS_2 concentrations detected in soil boring Lot 19-SB-10, which was drilled in 2004 just outside the limit of the former CS_2 storage moat. Borings SB-21 and SB-23 were drilled in the central and southern edges of the former CS_2 storage moat, respectively, and in a different tank vault from boring SB-20. Soil boring SB-21 was terminated at the inside bottom (i.e., this boring did not penetrate the concrete bottom) of the former CS_2 storage moat at a depth of 13 feet and soil boring SB-23 was advanced to the top of bedrock at a depth of 29 feet.

Cross sections of the former CS_2 storage moat contents, based on the borings, are provided on Figures 10 and 11. The cross section location plan is presented on Figure 9. Analytical results are shown on Figure 9 and summarized on Table 5.

The individual vaults that comprise the former CS_2 storage moat were found to be filled with flyash from the bottom of the vaults (approximately 13 feet bgs) to approximately 5 feet bgs; concrete was present from 5 feet bgs to the surface, which is consistent with the historical closure documentation that was reviewed. The inside of a steel tank was encountered in boring SB-23 and was found to be filled with flyash. Beneath the former CS_2 storage moat, the overburden was composed of clay, silt and sand with competent schist bedrock present at depths ranging from 26 to 29.5 feet bgs.

In boring SB-20, PID readings of the concrete present in the upper four feet of the tank vault were measured at 60 parts per million (ppm). The flyash underlying the surface concrete yielded PID readings ranging from 476 ppm to “off-scale”. PID readings were significantly lower ranging from background to 6.7 ppm in the soil beneath the concrete bottom of the former CS_2 storage moat at this location. The flyash sample collected from within the moat had a reported CS_2 concentration of 2.4 mg/kg while the soil samples collected from directly below the former CS_2 storage moat and just above bedrock had reported concentrations of 0.081 mg/kg and “non-detect” (<0.047 mg/kg). These CS_2 concentrations are below the non-residential direct contact MSC (10,000 mg/kg), non-residential soil-to-groundwater MSC (620 mg/kg), and SV_{SOIL} (530 mg/kg). At SB-20, the higher CS_2 concentrations are within the vault itself with little impact to the underlying subsurface soil. A grab perched water sample was also collected from SB-20 and analyzed for CS_2. The reported concentration of 0.33 mg/L was below the non-residential used aquifer MSCs for groundwater and the SV_{GW} as summarized on Table 6.

Borings SB-21 and SB-23 were drilled at opposite ends of the same UST vault, with boring SB-21 drilled near the center of the former CS_2 storage moat and boring SB-23 drilled at the southern end, as shown on Figure 12. The recorded PID readings within this vault ranged from 57 ppm to off scale. The recorded PID readings in the soil beneath the former CS_2 storage moat ranged from 4,287 ppm to off-scale. Flyash samples collected from within the moat at these two boring locations had reported CS_2 concentrations of 0.950 mg/kg in boring SB-23 and 17,000 mg/kg in boring SB-21. Soil samples collected from beneath the moat had much lower reported CS_2 concentrations in soil boring SB-23, from 1,400 mg/kg a few feet beneath the vault to 17 mg/kg at the top of bedrock at a depth of 29.5 feet. As noted above, SB-21 was terminated at the bottom of the concrete moat. Thus, although the CS_2 concentration just beneath the vault exceeded the non-residential soil-to-groundwater MSCs and SV_{SOIL}, the CS_2 concentrations just above the bedrock were below these standards.

5.1.1.2 2015-2017 Former CS_2 Storage Moat Area Investigation

A geophysical investigation was performed in April 2017 to verify the absence of the two CS_2 USTs formerly depicted near the eastern boundary of Lot 19 and to determine the location of the historical storage moat in the southeastern portion of Lot 19. The geophysical investigation verified the absence of the two USTs and confirmed the location of the historical moat.

Two Historical CS_2 USTs

In addition to the geophysical investigation, an air knife was used to advance a soft dig borehole at two locations to a depth of 5 feet bgs above the approximate locations of the two CS_2 USTs as shown on a 1965 Plot Plan (Appendix H). Neither of the USTs were observed at either air knife location. One soil boring, L16-SB04, was advanced to a depth of 12 feet bgs near the suspected location of the southern UST. The locations of the geophysical survey on Lot 16 and ERM-L16-SB04 are shown on Figure 9. The UST was not encountered in this soil boring. Three soil samples were collected from this soil boring at depths of 0-1 foot, 7-8 feet and 11-12 feet. CS_2 results from these three samples were below the non-residential direct contact and soil-to-groundwater MSCs, with a highest reported concentration of 0.012 mg/kg.

A shallow geophysical anomaly approximately 2 feet bgs was detected on Lot 16 during the geophysical investigation (Figure 9). FMC air knifed five locations to a depth of five feet deep directly above the area to identify the anomaly. It was determined that the anomaly was debris.

Historical Storage Moat in Southeastern Portion of Lot 19

Historical facility drawings indicated that a CS2 storage moat was located in the southeastern portion of Lot 19 just north of the former administration building. Upon review of the soil boring locations from the 2015-2016 investigation, it was determined that soil boring L19-SB04 was advanced through the approximate middle of the historical storage moat.

Review of the soil boring log shows that the moat is filled with soil with gravel/pulverized rock at a depth of 6-7 feet bgs. PID readings from this soil boring were zero at all locations. Three

soil samples were collected from L19-SB04. One was collected from the surface soils and the other two were collected from a depth below the gravel/pulverized rock layer. None of the soil samples had reported CS_2 concentrations that exceeded the MSCs with the highest result being 0.13 mg/kg at a depth of 10-11 feet bgs.

In addition, anecdotal information regarding the closure of the historical storage moat was obtained from Mike Manerchia who worked for KS Processing Company, Inc. that was located on Lots 16, 18 and 19 in the late 1980s. Mr. Manerchia told FMC that he had removed the material from the floor of the former storage moat vaults and backfilled the vaults with soil in the late 1980s. The material that was removed from the floor of the moat was reportedly transferred to a staging area approximately 50 feet north and is currently beneath an asphalt cover (Figure 9). After reviewing the locations of soil borings it was determined that soil boring Lot 16 SB-4, drilled in April 2004, was advanced through this staging area and soil boring L16-SB01, drilled in March 2016, was advanced immediately adjacent to this staging area on the northeast side. Six soil samples were collected from borings Lot 16 SB-4 and L16-SB01 up to a depth of 20 feet bgs. None of the reported CS_2 concentrations from these samples exceeded MSCs and the highest reported detection was 0.044 mg/kg from a depth of 19-20 feet directly beneath the staging area.

5.1.2 2010 Soil Investigation

FMC conducted a soil investigation in 2010 to identify potential sources of CVOCs found in groundwater. Seventy-three (73) soil gas samples were collected using Gore-Sorber^{Ò} modules installed throughout Lots 8-17. The results of this semi-quantitative analysis are shown on figures that are presented in Appendix I. Areas with higher relative constituent masses are shown on the figures as colored areas; the colors indicate relative response for that constituent. Soil samples were then collected to quantify CVOC concentrations in areas with higher relative responses.

Twenty-eight (28) soil borings were completed on Lots 9, 10, 11, 12, 13, 14, 15 and 17. [Note – soil borings ESB-16 and ESB-17 were not installed due to their location on a concrete slab above the basement of a former building on Lot 12.] A sample was collected from each boring for laboratory analysis. The sample results were compared to the Act 2 non-residential direct contact MSCs and the non-residential soil-to-groundwater MSCs. The results from the sampling event are shown on Table 7 and Figure 31. Out of the 28 samples, only one sample location (ESB-4 in Lot 17) had reported soil concentrations that exceeded the MSCs. The reported TCE and PCE concentrations exceeded the respective soil-to-groundwater MSC at that location. In addition, the reported carbon tetrachloride, TCE, and PCE concentrations exceeded the respective SV_{SOIL} at ESB-4. No other samples had reported concentrations that exceeded the MSC or SV_{SOIL}.

The ESB-4 location was evaluated further in subsequent investigations to determine whether or not a potential source was present in this area, as described below in Sections 5.2 and 5.4.

5.1.3 Comprehensive Site-Wide Soil Investigation

FMC completed a comprehensive soil investigation in 2015-2016 in accordance with the RIWP. One hundred two (102) soil borings were completed and 258 samples collected (Figure 13, Plates 1 and 2).

Fifty (50) soil samples had reported concentrations that exceeded at least one non-residential direct contact MSC and/or non-residential soil-to-groundwater MSC. The remainder of the soil samples (208) did not have reported detections that exceeded MSCs. The results are summarized below, and are presented in Table 8 and on Figures 32 and 33. The laboratory analytical reports are provided on CD in Appendix J.

Surface Soils

One hundred two (102) surface soil (0 to 2 ft bgs) samples were collected; 22 of these samples had reported concentrations that exceeded non-residential direct contact (0-2 ft bgs) MSCs, including the following constituents and as shown on Figure 32.

- Antimony on Lot 15;
- Arsenic on Lot 11;
- Benzo(a)anthracene on Lot 20;
- Benzo(a)pyrene on Lots 1 Borough of Marcus Hook, 10, 20, and 22;
- Benzo(b)fluoranthene on Lot 20;
- Benzo(k)fluoranthene on Lot 20 ;
- Lead on Lots 11, 15, 17, and 24;
- PCB (Aroclor 1260) on Lots 17 and 21;
- Vanadium on Lots 4, 8, 9, and 10.

FMC performed additional surface soil sampling in 2017 to further characterize soils in the areas of these samples as described in Section 5.1.4.

Thirty nine (39) surface samples had reported concentrations that exceeded non-residential soil-to-groundwater MSCs as shown on Figure 33 including the following constituents:

- Antimony on Lots 4, 10, 13, 15 and 24;
- Arsenic on Lots 1 Borough of Marcus Hook, 8, 9, 11, 13, 14, 15, 16, and 17;
- Benzo(a)pyrene on Lot 21 ;
- Lead on Lots 4, 6, 8, 10, 11, 12, 13, 15, 17, 20 and 24;
- Mercury on Lots 8, 9, 13 and 21;
- Vanadium on Lots 4, 8, 9, and 10.

No surface soil samples exceeded the SV_{SOIL}. No surface soil samples had reported asbestos concentrations above 1 percent.

Subsurface Soils

One hundred fifty-six (156) subsurface (>2 ft bgs) soil samples were collected. No samples had reported concentrations that exceeded the non-residential direct contact (2-15) MSC; thirteen samples had reported concentrations that exceeded non-residential soil-to-groundwater MSCs including the following constituents and as shown on Figure 33:

- 1,2,4-TCB on Lot 17;
- Antimony on Lots 4 and 10;
- Arsenic on 11, 13, and 19;
- Benzo(a)pyrene on Lots 23;
- Lead on Lots 10, 19, and 24;
- Manganese on Lots 9 and 24;
- Mercury on Lot 4;
- Naphthalene on Lots 14 and 23; and
- Thallium on Lots 2, 3, and 10.

Only one subsurface soil sample (L04-SB-02 5-10 ft bgs) had a reported asbestos concentrations above 1 percent (note that there is no PA Act 2 MSC for asbestos).

5.1.4 Additional Surface Soil Sampling

Additional surface soil sampling was performed in April, July and October 2017 to fully characterize and delineate areas where soil samples collected during the 2015-2016 comprehensive site-wide soil sampling effort had reported concentrations above non-residential direct contact (0-2 ft. bgs) MSCs. [Note that the additional characterization sampling focused on the direct contact pathway since FMC is proposing to utilize the site-specific standard to address the soil-to-groundwater pathway, as discussed further in Section 7.0.] Samples were analyzed for the compound(s) that were reported above MSCs in the corresponding prior sample and included antimony, arsenic, lead, Aroclor 1260, vanadium, and/or benzo(a)pyrene.

The analytical results from the additional surface soil samples were compared to the non-residential direct contact (0-2 ft. bgs) MSCs. Sample results are summarized in Table 9 and sample locations and results are shown on Figures 16 through 22. The laboratory analysis reports are provided in Appendix J.

Forty (40) soil samples were collected in April 2017 from Lots 1 Borough of Marcus Hook, 4, 8, 9, 10, 11, 15, 17, 21, 22, and 24 to further characterize the identified areas. Nineteen (19)

additional samples were collected from Lots 4, 15, 17, 21, and 22 in July 2017 to further refine the characterization in those areas. The results of the sampling are summarized below.

Lot 4

One soil sample had a reported vanadium concentration that exceeded non-residential direct contact (0-2 ft. bgs) MSCs, as shown on Figure 16. Four additional soil samples were collected and analyzed for vanadium in April 2017. All four of these samples exceeded the non-residential direct contact (0-2 ft. bgs) MSC, so six additional soil samples were collected in July 2017 to refine the delineation. Three of these six samples exceeded the non-residential direct contact (0-2 ft. bgs) MSC for vanadium.

Lots 8, 9, and 10

Eight (8) soil samples exceeded non-residential direct contact (0-2 ft. bgs) MSCs for vanadium and one sample exceeded the MSCs for benzo(a)pyrene as shown on Figure 17. Three additional soil samples were collected from Lots 8-10 and analyzed for vanadium. Two of the three samples had reported vanadium concentrations below the MSC; the third sample, collected on Lot 10, had a reported vanadium concentration above the direct contact MSC.

Lot 11

Two soil samples exceeded non-residential direct contact (0-2 ft. bgs) MSCs for lead, as shown on Figure 17. One of these samples also exceeded non-residential direct contact (0-2 ft. bgs) MSCs for arsenic. An additional soil sample was collected on Lot 11 and analyzed for arsenic, lead and vanadium. The reported results were all below the respective direct contact MSCs.

Lot 15

One soil sample exceeded non-residential direct contact (0-2 ft. bgs) and soil-to-groundwater MSCs for antimony and lead as shown on Figure 18. An additional four soil samples were collected in April 2017 and analyzed for antimony and lead. Two of these soil samples exceeded the non-residential direct contact (0-2 ft. bgs) MSC for lead; the other two samples had reported concentrations below the MSC. An additional four soil samples were collected in July 2017 and analyzed for lead. All four samples had reported lead concentrations above the non-residential direct contact (0-2 ft. bgs) MSC.

To facilitate a more efficient follow-up sampling effort, an XRF was utilized to field screen the soils in the area prior to collecting additional characterization samples for laboratory analysis. Based upon the XRF screening, five additional soil samples were collected and analyzed for lead. Three of these samples had reported lead concentrations below the direct contact MSC, and two did not. Further soil sampling beyond these two locations was not possible due to remnant concrete structures on Lot 15, however, sample results from other lots provide sufficient delineation data.

Lot 17

Two soil samples on Lot 17 exceeded the non-residential direct contact (0-2 ft. bgs) MSC for Aroclor 1260; one location at the northern end of the lot and one location at the southern end of the lot, as shown on Figure 19. An additional eight soil samples were collected in April 2017 to refine the delineation around these two sample locations. The additional samples collected from the southern end of the lot had reported Aroclor 1260 concentrations below the MSC and completed the delineation in this area. Three of the four samples collected from the northern end of the lot had reported Aroclor 1260 concentrations above the non-residential direct contact (0-2 ft. bgs) MSC. An additional four soil samples were collected in July 2017 from the northern area. Two of these samples exceeded the non-residential direct contact (0-2 ft. bgs) MSC; however, soil sample L17-SB03 collected approximately 70 feet south of these samples served to delineate Aroclor 1260 in this area, so additional sampling was not necessary for delineation purposes.

Lot 21

One soil sample collected from Lot 21 had a reported Aroclor 1260 concentration above the non-residential direct contact (0-2 ft. bgs) MSC. Four additional soil samples were collected in April 2017 and analyzed for Aroclor 1260 to refine the delineation in this area. One of these four samples had a reported Aroclor 1260 concentration above the non-residential direct contact (0-2 ft. bgs) MSC, as shown on Figure 20, so two additional soil samples were collected in July 2017. The reported concentration in one of the samples did not meet the MSC, but the concentration for the other sample did and served to complete the delineation of Aroclor 1260 in this area.

Lot 1 and Lot 22

Three soil samples exceeded the non-residential direct contact (0-2 ft. bgs) MSC for benzo(a)pyrene as shown on Figure 21. An additional 12 soil samples were collected in April 2017 to refine the delineation around these three sample locations. Ten of the 12 samples had reported benzo(a)pyrene concentration below the non-residential direct contact (0-2 ft. bgs) MSC, but two samples, both located on Lot 22, did not. Three additional soil samples were collected in July 2017. The reported results were below the MSC and served to complete the delineation in this area.

Lot 24

One soil sample, located on the northern portion of the lot near Penn Avenue, exceeded the non-residential direct contact (0-2 ft. bgs) MSC for lead as shown on Figure 22. An additional four soil samples were collected in April 2017 and analyzed for lead. The reported lead concentrations were all below the MSC and served to complete the delineation in this area.

5.1.5 Soils Summary

The following summarizes the soil data collected during FMC investigations from 2015-2017. A total of 166 surface soil samples (0-2 ft. bgs) and 156 subsurface samples (greater than 2 ft. bgs) were collected as part of these investigations. These data are summarized in relation to the non-residential direct contact MSC on Figure 32 and the non-residential soil-to-groundwater MSC on Figure 33.

Surface Soil (0-2 ft. bgs)

Surface soil results were below the non-residential surficial soil direct contact MSCs for all tested regulated substances with the exception of the following limited detections of SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b) fluoranthene, benzo(k)fluoranthene), metals (antimony, arsenic, lead, vanadium) and PCBs (Aroclor 1260). All samples detected above the non-residential direct contact MSCs were delineated on a site-wide basis, as shown on Figure 32, with the exception of vanadium in limited areas.

Pursuant to Pa. Code § 250.707(b)(ii), the 95% Upper Confidence Limit (UCL) of the mean was derived for each of these constituents to evaluate attainment of the MSCs for direct contact with surface soil. The 95% UCL was calculated using ProUCL® v5.1 to determine the 95% UCL surface soil (0' – 2' bgs) concentration for each regulated substance noted above (see Attachment A to the risk assessment (Appendix P) for ProUCL output). The calculated 95% UCL was then compared to the non-residential direct contact soil MSCs in the table below.

COMPARISON OF THE 95% UPPER CONFIDENCE LIMIT OF THE MEAN SURFACE SOIL CONCENTRATION TO THE NONRESIDENTIAL DIRECT CONTACT MSCS.

Analyte	Sample Size	Number Non Detects	Number of Detects	Maximum[1]	95 % UCL or Avg.[1]	UCL Basis	NR DC MSC[1,2]
Antimony	106	48	58	1,500	86.9	95% KM (Chebyshev) UCL	1,300
Arsenic	103	2	101	89.7	17.7	KM H-UCL	61
Lead	124	0	124	47,500	2,991	95% Chebyshev (Mean, SD) UCL	1,000
Vanadium	116	0	116	1,680	239	95% Chebyshev (Mean, SD) UCL	220
Aroclor 1260	120	23	97	17,000	688	KM H-UCL	46
Benzo(a)anthracene	102	3	99	200	4.5	KM H-UCL	130
Benzo(a)pyrene	117	2	115	110	3.7	KM H-UCL	12
Benzo(b)fluoranthene	102	1	101	160	4.7	KM H-UCL	76
Benzo(k)fluoranthene	102	6	96	81	2.2	KM H-UCL	76

Notes:
NA – Not applicable
[1] Concentrations in mg/kg
[2] NR DC MSC – Non-residential Direct Contact MSC for surface soil.

Based on this comparison, the 95% UCL for antimony, arsenic, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and benzo(k)fluoranthene in surface soil are *below* the non-residential surficial direct contact soil MSC and, thus, meet attainment of the SHS. The 95% UCL for vanadium, lead and Aroclor 1260, however, exceeded their non-residential direct contact soil MSCs. Consequently, potential risks posed by exposure to these three constituents are evaluated further in the site-specific risk assessment, included as Appendix P

Surface soil results were below the non-residential soil-to-groundwater MSCs with the exception of the following SVOC (benzo(a)pyrene), metals (antimony, arsenic, lead, thallium, vanadium, mercury) and Aroclor 1260. All surface soil samples with reported concentrations above the non-residential soil-to-groundwater MSCs were delineated on a site-wide basis, as shown on Figure 33, with the exception of arsenic, lead, vanadium, and mercury in limited areas. The constituents which exceeded the non-residential soil-to-groundwater MSCs are evaluated further in Section 6.7.2.

Subsurface Soil (> 2 ft bgs)

All subsurface soil sample results were below the non-residential soil direct contact MSCs for subsurface soils.

Subsurface soil sample results were below the non-residential soil-to-groundwater SHS MSCs with the exception of the following: VOCs (1,2,4-TCB), SVOCs (benzo(a)pyrene, naphthalene), and metals (antimony, arsenic, lead, manganese, mercury and thallium). All samples detected above the non-residential soil-to-groundwater MSCs were delineated on a site-wide basis, as shown on Figure 33, with the exception of arsenic, lead, thallium, one detection of antimony, and one detection of manganese. The constituents which exceeded the non-residential soil-to-groundwater MSC were evaluated through the groundwater pathway and will be discussed further in Section 6, Conceptual Site Model, and in the Human Health Risk Assessment. TCE and PCE were detected above PADEP soil-to-groundwater MSCs in a sample collected from Lot 17 in 2010. Follow up soil sampling data from this same area (collected in 2015 and 2016) did not reveal any exceedances of these criteria for TCE or PCE. The most recent soil analytical data were utilized in this RI/RA evaluation.

5.2 GROUNDWATER

FMC has performed 19 groundwater sampling events since 2004, including eight consecutive quarters of sampling in 2007-2009 and eight consecutive quarters of sampling in 2016-2018. Field observations and analytical results are discussed below.

5.2.1 Geophysical Logging

Downhole geophysical surveys were performed on the boreholes for MW-BD, MW-FD and MW-IDD/MW-I3 to provide information on location of fractures and water-producing or water-receiving zones that may influence groundwater flow. Earth Data Northeast performed the geophysical logging of MW-BD and MW-FD on April 22 and May 4, 2004, respectively, and Delta

Geophysics Inc. performed the geophysical logging of MW-IDD/MW-I3 on May 5, 2016. The following logs were created and are presented in Appendix F:

- caliper,
- fluid temperature,
- fluid conductivity,
- short normal resistivity,
- long normal resistivity,
- single point resistance,
- spontaneous potential, and
- natural gamma.

Acoustical televiewer, optical televiewer, and heat pulse flow meter logs were also created for MW-IDD/MW-I3.

Location of Water Bearing Fractures

The multiple independent geophysical logs were reviewed and correlated, relative to depth, to identify fractures and water-producing zones within the borehole, as summarized below.

5.2.1.1.1 MW-IDD/MW-I3

The geophysical logs identified limited water producing fractures within the MW-IDD/MW-I3 borehole. The most prominent fractures occur shallow within the borehole between 40 and 42.5 ft bgs. Fractures within this zone fluctuate in direction and dip between north/northeast at approximately 30° and southwest at approximately 60°. Multiple logs, including caliper, resistivity, and heat pulse logs, showed correlated changes within this zone, indicating potential water production with a downhole flow direction. Additionally, another significant fracture set was observed at 106.5 ft bgs, dipping toward the east at 70° on average. Several smaller fractures are below these structures and have various directions and dips, with no obvious trend or significant water-producing capabilities. According to the US Geological Survey Water-Supply Paper 2346 *Geohydrology and Ground-Water Resources of Philadelphia, Pennsylvania* by Gary N. Paulachok regarding the Wissahickon Formation "Wells in fractured or deeply weathered rock have specific capacities as high as 30 (gal/min)/ft, whereas wells in unfractured fresh rock have specific capacities of almost zero." The geophysical data from MW-IDD/I3 supports this conclusion.

5.2.1.1.2 MW-BD

MW-BD also contained shallow fracture sets, but little water-bearing capabilities deeper within the borehole. Significant fractures were observed at approximately 57, 70, and 85 ft bgs, with a highly fractured zone from 81 – 88 ft bgs capable of producing water. Beneath this zone few additional notable fractures were observed. However, lithological changes were indicated by

the gamma log at approximately 110 and 120 ft bgs, which corresponded to observation of additional quartz noted in the monitoring well log which is included in Appendix E.

5.2.1.1.3 MW-FD

MW-FD only had 30 feet of saturated borehole able to be logged. Of this portion, very limited evidence was provided to support fracture locations and water-bearing capabilities. A small response was recorded by the caliper and resistivity logs at approximately 55 ft bgs, indicating a potential for a minor fracture with limited water-bearing capabilities.

Bedrock Structures

The bedrock underlying the Site is the Wissahickon Formation which is characterized as a dark- to light-gray, well-foliated schist, having some quartz- and/or feldspar-rich layers (PGS, 1981). The top of bedrock is approximately 20 to 30 ft bgs. In this area, the upper portion of the Wissahickon Formation is a saprolite which grades to competent bedrock within approximately 25 to 50 ft bgs. Flow in the Wissahickon Formation is essentially restricted to the saprolite layer and fractures in the underlying competent bedrock. Fractures are most abundant near the bedrock surface and are much less frequent at depths greater than 200 ft bgs, which was confirmed with downhole geophysics in MW-IDD/I3 and also evidenced by the extremely slow recharge rate in MW-I3 (MW-I3 has yet to fully recharge since it was installed in May 2016).

The acoustic and optical televiewer logs were used to measure the dipping surface of the fracture and bedding planes within the MW-IDD/MWI3 borehole. The dip angle of the fractures and the directional azimuth was calculated for individual and fracture sets and were described above. The bedding planes and associated smaller fractures which were observed to be shallow within the borehole (42 – 98 ft bgs) trend to the southwest with varying dip angles that appear to decrease with depth. Below 98 ft, a directional change occurs resulting in the majority of the planer structures trending to the east with moderate dips, indicative of a fold. This trend continues for approximately 100 ft within MW-IDD/MW-I3, after which the trend reverts back to a southwestern orientation.

This information corresponds to USGS published regional geologic maps, describing a highly undulating, folded and fractured metamorphic bedrock system. As summarized in Section 3.4, since the azimuth and dip angles of the various fractures are not consistent throughout the borehole and have a range in orientation, they do not have a consistent influence to the general flow direction of the groundwater flow in the area of MW-IDD/I3.

5.2.2 Groundwater Flow

Groundwater depth-to-water readings were collected from the Site monitoring wells prior to each groundwater sampling event and are presented in Table 3. The water table/potentiometric surface contour maps for the April 2018 monitoring event are presented as Figure 7 and 8; the other quarterly events are included in Appendix G. The overburden water level and bedrock potentiometric conditions were generally consistent in all sampling

events and showed groundwater flow to the east/southeast, although groundwater elevations at individual wells varied slightly between sampling events.

5.2.3 Analytical Results

Groundwater sample analytical data was compared to the PADEP Act 2 non-residential used aquifer MSCs for groundwater with less than 2,500 mg/L of total dissolved solids (non-residential groundwater MSCs) and the SV_{GW}. The data is summarized on Table 6, and exceedances of the organic and inorganic non-residential groundwater MSCs are depicted on Plate 3 and Plate 4, respectively. It is noted that PCBs and ethanol, ethyl acetate, n-butyl acetate, n-butyl alcohol, and tetrahydrofuran (compounds identified as part of the former rayon/cellophane operations) were not detected above non-residential MSCs in any of the groundwater samples.

A summary of the results from the most recent eight quarterly sampling events is provided below and evaluated further as part of the Conceptual Site Model (Section 6.0) and risk assessment (Section 7.0). Laboratory analytical reports are presented in Appendix K.

Although the reported concentrations of a few VOCs and metals in some monitoring wells remain above the Act 2 non-residential groundwater MSCs, most monitoring wells generally show stable or decreasing concentration trends. The Tobit Trend Test was utilized to determine trends in each well. The Tobit Trend Test, which is a parametric method, was selected because it is known to have higher power (i.e., ability to detect a trend when one is there) compared to non-parametric methods (e.g., Mann Kendall) and it is considered an unbiased method when addressing non-detect values, which exist in the Site dataset.

A series of trend plots that illustrate the concentration trends over the most recent eight consecutive quarters of sampling (May 2016 to April 2018) for those organic and inorganic constituents that exceed non-residential groundwater MSCs are provided in Appendix L. A trend “direction” is only listed for those wells/compounds where a statistically significant slope (i.e., increase or decrease) was found in the Tobit analysis. Trends that are shown as “NS”, or not significant, on the trend plot figures indicate stable conditions over time.

Overburden

5.2.1.1.4 Organics

A few organic compounds were detected at concentrations above the non-residential groundwater MSCs in samples collected from two overburden monitoring wells (MW-DS and MW-JS), as shown on Plate 3. MW-DS is located on Lot 14 and MW-JS is located on Lot 23.

1,2,4-TCB, PCE and TCE were detected in monitoring well MW-DS above the non-residential groundwater MSCs between May 2016 and April 2018 at the following ranges:

- 1,2,4-TCB - 0.069 mg/L to 0.15 mg/L
- PCE - 0.002 mg/L to 0.16 mg/L

- TCE - 0.002 mg/L to 0.063 mg/L.

1,1-DCE was detected in monitoring well MW-JS starting in the May 2016 sampling event, and was reported at concentrations above the non-residential groundwater MSC since the January 2017 sampling event. TCE was detected beginning in the January 2017 sampling event, and was reported at concentrations above the non-residential groundwater MSC since the August 2017 sampling event. PCE was initially detected during the March 2017 sampling event, and was reported at concentrations slightly above the MSC in samples collected in January and April 2018. Over the last eight quarterly sampling events, the 1,1-DCE, TCE, and PCE concentrations were reported in the following ranges:

- 1,1-DCE - 0.003 mg/L to 0.021 mg/L;
- TCE - ND<0.0005 to 0.019 mg/L;
- PCE – ND<0.0005 to 0.012 mg/L.

Tobit Statistical Analysis

Based on the Tobit statistical analysis (Appendix L), the detections of each of these chlorinated organics in MW-DS are either decreasing or stable.

Based on the Tobit analysis, 1,1-DCE, TCE, and PCE concentrations in MW-JS appear to be increasing, albeit relatively slowly. The 1,1-DCE, TCE and PCE concentrations in samples collected from the downgradient overburden wells (MW-BS and CS) are below non-residential MSCs. The nature and extent of the VOCs in MW-JS is evaluated further in the Conceptual Site Model (Section 6.0) and risk assessment (Section 7.0).

5.2.1.1.5 VI Screening

The groundwater sample results over the most recent eight consecutive quarters of sampling (May 2016 to April 2018) were below the SV_{GW}, indicating that a clean water lens exists across the majority of the Site. However, due to the presence of potential preferential pathways and the anticipated use of a site-specific standard, an additional assessment was conducted to evaluate the vapor intrusion pathway in these areas, as presented in Section 5.4.

5.2.1.1.6 Inorganics

Arsenic, antimony, chromium, cobalt, lead, manganese, nickel, thallium, vanadium, and zinc have been reported above their respective non-residential groundwater MSCs in at least one well as shown on Plate 4 and summarized on Table 6.

Tobit Statistical Analysis

Based on the Tobit statistical analysis, the concentrations of the metals listed above are generally stable or decreasing in most overburden monitoring wells. An apparent increasing trend was identified by the Tobit analysis for manganese in MW-BS. Given the widespread and relatively consistent presence of manganese, including in the upgradient wells, it is believed

that that manganese is naturally occurring from the formation and from the historical fill material. The nature and extent of metals in overburden groundwater is evaluated further in the Conceptual Site Model (Section 6.0) and risk assessment (Section 7.0).

5.2.1.1.7 Overburden Summary

Based upon the most recent eight quarters of groundwater sampling, concentrations above non-residential groundwater MSCs in overburden include: 1,2,4-TCB, TCE, PCE, antimony, arsenic, beryllium, chromium, cobalt, lead, manganese, nickel, thallium, vanadium and zinc, as shown on Plates 3 and 4. Based on the April 2018 sampling event, dissolved organic concentrations in overburden groundwater are delineated in the downgradient direction at the Site with the exception of 1,2,4-TCB, PCE and TCE in MW-DS. A decreasing or stable trend has been observed for these constituents in MW- DS. Dissolved inorganic concentrations in overburden groundwater are delineated in the downgradient direction with the exception of: manganese in several wells; arsenic in MW-CS; antimony in MW-CS and MW-09 West; cobalt in MW-CS; lead MS-CS; and nickel in L22 MW-02 and MW-09 West. A decreasing or stable trend has been observed for these constituents with exception of manganese.

FMC evaluated groundwater elevation trends in relation to concentration trends (Appendix R) and there does not appear to be a strong correlation between groundwater elevation and dissolved concentrations trends. While the dissolved concentrations do not appear to be influenced by groundwater elevation trends, the groundwater conditions in the vicinity of MW-JS may be influenced by upward vertical gradients from bedrock in this area based on an evaluation of upward vertical gradients. The nature and extent of overburden groundwater is evaluated further in the Conceptual Site Model (Section 6.0) and risk assessment (Section 7.0).

Bedrock

5.2.1.1.8 Organics

Organic compounds that exceed non-residential groundwater MSCs more than one time during the most recent eight quarters of bedrock groundwater monitoring include the following:

- 1,1,2,2-Tetrachloroethane,
- 1,1-DCE,
- 1,2,4-Trichlorobenzene,
- 2,6-Dinitrotoluene,
- CS_2,
- PCE,
- TCE, and
- Vinyl Chloride.

2,6-Dinitrotoluene was only detected one or two times in only three deep bedrock wells (MW-C3, MW-D3, and MW-I3) and does not appear to be Site related. One or more of the other above listed organic compounds have been identified at concentrations above non-residential groundwater MSCs in samples collected from wells located in the following four general areas of the Site:

- Upgradient Area (Lots 1 & 2) – characterized by MW-AD and L01 MW-5D, which are located in the upgradient portion of the Site near East 10th Street.
- Eastern Portion of Site (Lots 10, 11, 12, and 13) – characterized by MW-BD, MW-C nest, MW-LD, which are located along the eastern portion of the Site
- Southeastern Portion of Site (Lots 14, 17 and 24) – characterized by MW-D nest, MW-KD and MW-I nest which are located near the southeastern portion of the Site.
- Downgradient of Former CS_2 Storage Moat Area (Lots 19, 21 and 22) – characterized by MW-F nest and MW-GD, which are located downgradient of the former CS_2 storage moat area.

The analytical results during the most recent 8 quarters are discussed by area below, and are presented on Table 6; the exceedances of the organic non-residential groundwater MSCs are depicted on Plate 3.

5.2.1.1.9 Upgradient Area (Lots 1 & 2)

Monitoring wells L01-MW-5D and MW-AD are located in Lots 1 and 2, respectively. PCE was detected in monitoring well L01 MW-5D at concentrations that fluctuated above and below the non-residential groundwater MSC (0.005 mg/L), ranging from 0.003 mg/L to 0.007 mg/L. No other chlorinated VOCs (CVOCs) CVOC were reported at concentrations above the MSC in this well.

During the most recent eight quarters of groundwater sampling, the following chlorinated organic compounds were reported at concentrations above their respective non-residential groundwater MSC in more than one sample collected from MW-AD: 1,1,2,2-Tetrachloroethane, 1,1-DCE, PCE, TCE and vinyl chloride. The reported concentrations ranges were as follows:

- 1,1,2,2-Tetrachloroethane - ND <0.0005 mg/L to 0.03 mg/L.
- 1,1-DCE - 0.008 mg/L to 0.062 mg/L.
- PCE - 0.017 mg/L to 0.13 mg/L.
- TCE - 0.002 mg/L to 0.18 mg/L.
- Vinyl chloride - ND<0.0005 mg/L to 0.005 mg/L..

<u>Tobit Statistical Analysis</u>

Based on the Tobit statistical analysis, the concentrations of CVOCs at L01 MW-5D and MW-AD are stable, and the data show some similar trends for PCE and vinyl chloride in MW-AD.

5.2.1.1.10 Eastern Portion of Site (Lots 10, 11, 12 & 13)

1,1-DCE was detected in monitoring wells MW-BD, MW-CD, MW-CDD, MW-C3 and MW-LD at concentrations above the non-residential groundwater MSC. The 1,1-DCE concentrations in these wells have been generally stable or decreasing over the last eight quarters of sampling within the following ranges:

- MW-BD - 0.045 mg/L to 0.088 mg/L.
- MW-CD - 0.14 mg/L to 0.33 mg/L
- MW-CDD - 0.24 mg/L to 0.29 mg/L.
- MW-C3 - 0.003 mg/L to 0.011 mg/L.
- MW-LD - 0.008 mg/L to 0.01 mg/L.

Tobit Statistical Analysis

Based on the Tobit statistical analysis (Appendix L), 1,1-DCE and other CVOCs detected in these wells are either decreasing or stable, with the exception of 1,1-DCE at MW-BD. Although the statistical analysis suggests an apparent increasing trend, the 1,1-DCE concentration at MW-BD has remained relatively stable since 2004. 1,1-DCE concentration was 0.06 mg/L in 2004 and has fluctuated within ±0.03 mg/L since that time.

5.2.1.1.11 Southeastern Portion of Site (Lots 14, 17 & 24)

1,1-DCE, PCE, TCE, and/or vinyl chloride were detected in MW-KD, MW-DD, MW-DDD, MW-ID, and MW-IDD at concentrations above the non-residential groundwater MSC in one or more sampling event. A summary of the reported concentration ranges (for COCs with at least one reported exceedance of the MSC) in these wells over the last eight quarters of sampling is as follows:

MW-KD

- 1,1-DCE - 0.018 mg/L to 0.071 mg/L
- PCE - 0.015 mg/L to 0.081 mg/L
- TCE - 0.22 mg/L to 0.31 mg/L.

MW-DD

- 1,1-DCE - 0.025 mg/L to 0.033 mg/L.
- PCE - 0.013 mg/L to 0.056 mg/L.
- TCE - 0.067 mg/L to 0.10 mg/L.
- Vinyl chloride - 0.002 mg/L to 0.004 mg/L.

MW-DDD

- 1,1-DCE - 0.068 mg/L to 0.081 mg/L.
- PCE - 0.006 mg/L to 0.015 mg/L.
- TCE - 0.22 mg/L to 0.26 mg/L.

MW-ID

- 1,1-DCE - 0.032 mg/L to 0.039 mg/L.
- TCE - 0.14 mg/L to 0.22 mg/L.

MW-IDD

- 1,1-DCE - 0.001 mg/L to 0.011 mg/L.
- TCE - 0.004 mg/L to 0.070 mg/L.

Tobit Statistical Analysis

Based on the Tobit statistical analysis, the concentrations of CVOCs found in samples from MW-ID, MW-IDD, MW-KD and the MW-D nest are either decreasing or stable, except for vinyl chloride in MW-DD, which was indicated as an increasing trend. However, review of the MW-DD sample results indicate that vinyl chloride concentrations appear relatively stable rather than increasing, fluctuating between 0.002 mg/L and 0.004 mg/L (compared to the MSC of 0.002 mg/L) over the most recent 8 quarters of sampling. It is also noted that vinyl chloride is a degradation product from the reductive dechlorination of PCE, TCE and 1,1-DCE, and the presence of vinyl chloride at the Site is believed to be a result of the reduction of the other CVOCs, rather than a historical source of vinyl chloride itself, as is further discussed in Section 6, Conceptual Site Model.

5.2.1.1.12 Downgradient of Former CS_2 Storage Moat Area (Lots 19, 21 & 22)

CS_2 was detected in MW-FDD and MW-GD above the non-residential groundwater MSCs in each sampling event during the last eight quarters of groundwater sampling. These wells are located downgradient from the former CS_2 storage moats. The CS_2 detections in MW-FDD were reported in a range of 200 mg/L to 480 mg/L, and in MW-GD were reported in a range of 14 mg/L to 100 mg/L.

Concentrations of CS_2 were previously reported in MW-FD greater than the non-residential groundwater MSC. The CS_2 concentrations have attenuated and are at concentrations less than the MSC over the last eight quarters of sampling. In addition, samples collected from bedrock wells further downgradient at the point of compliance, including MW-HD and the MW-I nest, do not contain CS_2 at concentrations above the MSC.

Tobit Statistical Analysis

The Tobit statistical analysis indicates that the CS_2 concentrations at MW-FDD and MW-GD are either decreasing or stable.

5.2.1.1.13 VI Screening

The bedrock groundwater sample results over the most recent eight consecutive quarters of sampling (May 2016 to April 2018) were below the SV_{GW}, except for CS_2 in MW-FDD and MW-GD, and TCE in MW-ID and MW-KD. As described above, the overburden groundwater data demonstrates that there is a clean water lens overlying the bedrock groundwater.

5.2.1.1.14 Inorganics

Inorganic regulated substances have been reported at concentrations above the non-residential groundwater MSCs at several bedrock wells. Manganese was reported at concentrations above the MSC at most wells, including the upgradient wells (e.g., MW-05D). Arsenic, antimony, beryllium, cadmium, cobalt, lead, nickel, thallium and vanadium have also been reported above their respective MSC, as shown on Plate 4. It is noted that the laboratory method detection limits were above the MSC for antimony, lead, and thallium for data prior to the October 2017 sampling event; however, this does not materially affect the results and findings.

Tobit Statistical Analysis

Based on the Tobit trend analysis, the concentrations of all these metals, except manganese, are stable or decreasing in bedrock monitoring wells. Increasing trends were indicated for manganese in MW-CD, MW-ED, MW-FD, and MW-IDD; however, given the widespread and relatively consistent presence of manganese, including in upgradient wells, it appears that manganese is naturally occurring as is discussed further in Section 6.0, Conceptual Site Model.

5.2.1.1.15 Bedrock Summary

Based upon the most recent eight quarters of groundwater sampling, concentrations above non-residential groundwater MSCs in bedrock groundwater include: vinyl chloride, 1,1-DCE, TCE, PCE, CS_2, antimony, arsenic, beryllium, cadmium, cobalt, lead, manganese, thallium and vanadium, as shown on Plates 3 and 4.

FMC evaluated groundwater elevation versus concentrations over time (Appendix R) to determine if the data indicated a potential source in soils contributing to groundwater, especially in the instances where increasing trends were observed in the groundwater data. A correlation between groundwater elevation and dissolved concentrations trends was not observed which indicated that there is not an ongoing source to groundwater from Site soils. The nature and extent of overburden groundwater is evaluated further in the Conceptual Site Model (Section 6.0) and risk assessment (Section 7.0).

Point of Compliance Wells

Point of compliance wells include the following:

- B Nest - MW-BS, MW-BD,
- C Nest - MW-CS, MW-CD, MW-CDD, MW-C3,
- D Nest - MW-DS, MW-DD, MW-DDD, MW-D3,
- MW-HD,
- I Nest – MW-ID, MW-IDD, MW-I3,
- MW-3,

- MW-6, and
- Lot 22 MW-02.

Groundwater sample results indicate several chlorinated organic and inorganic regulated substances had reported concentrations above non-residential groundwater MSCs in some of these wells. Therefore, the off-site fate and transport and potential risk concerns are evaluated further in the Conceptual Site Model (Section 6) and risk assessment (Section 7).

MW-9 West was significantly damaged sometime between October 2018 and February 2019. Lot 22 MW-02-is located approximately 75 feet west of MW-9 West and is screened at a similar interval in the overburden. Therefore, Lot 22 MW-02 adequately serves as the Point of Compliance well in this area, and MW-9 West will be abandoned.

Off-Site Groundwater

With respect to evaluating downgradient off-site groundwater, FMC has reviewed the available data from the downgradient refinery facility and has requested access to collect samples from select wells on that property. FMC was not able to gain access to sample these wells during any of the on-Site sampling events. FMC performed a review of PADEP's files pertaining to the refinery facility on October 6, 2017, including the available groundwater information. Based upon a review of the available data in *Sitewide Remedial Investigation Report, BP Former Marcus Hook Refinery* (Sovereign Consulting, November 2011) chlorinated VOCs are not present at concentrations above the non-residential groundwater MSCs at the wells immediately downgradient from the Site. The data were also used as part of the fate and transport analysis, as described in Section 6.6.

5.3 SUBSURFACE STRUCTURES

The analytical results for water samples collected in basements and sewer manholes were compared conservatively to the non-residential groundwater MSCs even though these samples are not groundwater samples. The basement water sample results are summarized on Table 10 and the sewer manhole water sample results are summarized on Table 11; the laboratory reports are included in Appendix M.

The two basement water samples did not contain reported concentrations above the non-residential groundwater MSCs. It should also be noted that there were no reported detections of PCBs, VOCs, or SVOCs in either of the two basement samples. These results indicate that the basements are not an active source to Site groundwater contamination or contributing to the migration of contamination.

The nine manhole water samples did not contain reported constituent concentrations above the non-residential groundwater MSCs, except for lead in two samples and manganese in three samples. Lead was reported at concentrations above the non-residential groundwater MSCs in the samples collected from mill waste manhole M-21 and sanitary manhole S-15. Lead was not

detected in Manhole M-26 which is located downstream of M-21. Sanitary manhole S-15 connects to a Borough Sanitary Sewer manhole located in Lot 12. Manganese was reported at concentrations above the MSC in the samples collected from manholes CW-21, S-15, and M-26. As previously noted, the sanitary sewer connects to the municipal sanitary sewer system, and the mill waste sewer system is believed to have been terminated (previously discharged to the on-site WWTP) and manganese is thought to be naturally occurring.

A comparison of the manhole water sample results to the recent groundwater sample results do not indicate a correlation that would suggest the sewers are an active source of contamination.

Five cross sections were prepared to compare the depths of the sewers and manholes to the top of the overburden water table at its highest measured water level readings that were measured between May 2016 and April 2018. The locations of the cross sections are shown on Figure 34 and the cross sections are provided as Figures 35-39. As shown on the figures, the vast majority of manholes and sewers are located above the water table. Of the 54 manholes shown on Figures 35-39 only four (three sanitary and one storm/clean water) intersect the overburden water table. The three sanitary manholes (S13, S15 and S25) connect to the Borough of Marcus Hook sanitary sewer line on Lot 12 which travels to the local Publically Owned Treatment Works. The one storm sewer manhole (C19) is located on Lot 14, and is part of the storm sewer that outfalls on the western bank of Marcus Hook Creek on Lot 13.

Detectable concentrations of CVOCs have been reported in samples of overburden groundwater collected from wells in the vicinity of manhole C19. The reported concentrations of these CVOCs in a water sample collected from Manhole C21, which is downstream of C19 and the last accessible manhole before the outfall, were less than the non-residential groundwater MSCs. This indicates that although the manhole and sewer may be below the water table in this area, it is not acting as a conduit for significant contaminant migration.

5.4 VAPOR INTRUSION ASSESSMENT

The following section presents the evaluation of vapor intrusion (VI) potential from Site soil and ground water. Data from the recent (2015-2018) sampling activities as well as relevant historical information has been evaluated as part of this assessment.

5.4.1 Soil Vapor Intrusion

A human health risk assessment (Appendix P) was completed for site soils, so in accordance with the criteria identified in Table IV-9 of the TGM, the site soil data was screened against 1/10th the generic non-residential soil-to-groundwater MSCs to identify those substances to be evaluated in the risk assessment VI evaluation. The volatile regulated substances in soil exceeding these screening criteria in at least one soil sample include 1,1-dichloroethene, 1,2,4-trichlorobenzene, 1,4-dichlorobenzene, napthalene, methylene chloride, and phenol. The risk posed by these compounds in soil to potential receptors are discussed further in Appendix P. TCE and PCE were detected above 1/10th the PADEP generic soil-to-groundwater MSCs in a

sample collected from Lot 17 in 2010. Follow up soil sampling data from this same area (collected in 2015 and 2016) did not reveal any exceedances of these criteria for TCE or PCE. The most recent soil analytical data were utilized in this RI/RA evaluation.

As previously noted, soil gas samples were collected near the former CS_2 storage moat (Figure 9) to assess whether or not there was a potential vapor intrusion concern in this area. Two rounds of samples were collected from two sample locations (SG-1 and SG-2). During the December 14, 2004 sampling event, CS_2 was detected at both SG-1 and SG-2, but at concentrations well below the non-residential PADEP Sub Slab Soil Gas SHS Vapor Intrusion Screening Value at that time (the results are also below the current SVss value). During the February 10, 2005 sampling event, CS_2 was not detected at either location. Based on these results, vapor intrusion of CS_2 is not a concern in this area. The results are summarized on Table 12. Laboratory analytical reports are presented in Appendix N.

5.4.2 Groundwater Vapor Intrusion

A human health risk assessment (Appendix P) was completed for site groundwater; therefore, following the criteria identified in Table IV-9 of the TGM, the site overburden groundwater data was screened against 1/10th the non-residential groundwater MSCs to identify those substances to be evaluated in the risk assessment VI evaluation. The volatile regulated substances in overburden groundwater exceeding these screening criteria in at least one sample include ethylene glycol, 1,2,4-trichlorobenzene, 1,4-dichlorobenzene, p-cresol, 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride. The risk posed by these compounds in overburden groundwater to potential receptors are discussed further in Appendix P.

FMC collected near-source soil gas samples in the vicinity of MW-DS and MW-JS and the proximate sewers to evaluate potential VI in the vicinity of these wells (Figure 29). As described in Section 4.4.2, due to elevated water table conditions, the two rounds of near-source soil gas samples were collected over four mobilizations. The initial round of sampling (December 18, 2017) and the subsequent rounds of sampling (February 2, April 11, and April 30, 2018) were at least 45 days apart in accordance with the VI Technical Guidance. The sample results reported from the sampling events (Table 13) and laboratory analytical reports are presented in Appendix N.

The human health risk assessment (Appendix P) included an evaluation of potential risk posed by soil vapor. The near source soil gas samples were screened against the EPA indoor air RSLs and 1/10th the generic PADEP indoor air screening value in accordance with Figure IV-9 of the TGM to determine which compounds to include human health risk assessment. Based on this comparison, trichloroethene and 1,2,4-trichlorobenzene were included in the human health risk assessment (Appendix P).

5.5 MARCUS HOOK CREEK

As discussed in Section 4.5, FMC collected sediment samples from three locations in Marcus Hook Creek in 2004 and from four locations in 2016.

The sample results indicate the presence of organic and inorganic constituents common to urban waterways, and are generally consistent with samples collected from downstream sections of the Creek and the Delaware River. The permitted discharge from the neighboring refinery generates a significant portion of the base flow in Marcus Hook Creek and adds significant thermal load (in-stream water temperature was measured in November 2017 to be 91.3°F approximately 300 feet downstream of the discharge). The sediment quality and overall habitat of Marcus Hook Creek are discussed in detail in the ecological risk assessment (Section 7 and Appendix C).

The sediment samples collected on July 7, 2016 were noted by the laboratory to be at an elevated temperature when received. The samples were iced appropriately after collection and were shipped to the laboratory the day after collection. However, as noted above, the temperature of Marcus Hook Creek is elevated (approximately 90-95 °F). and given this condition, the elevated sample temperature is not expected to have materially affected the analytical results.

6.0 CONCEPTUAL SITE MODEL

This section presents the Conceptual Site Model (CSM) for the Site. The CSM synthesizes and presents the physical conditions at the Site and the key relationships between sources, release mechanisms, migration pathways, contaminant distribution, contaminant attenuation, and potential receptors. The CSM is based on the findings of the Remedial Investigations completed through May 2018. The CSM has been prepared in accordance with Chapter 250.312 and the PADEP Technical Guidance Manual (TGM) to understand the extent of identified contamination of concern, potential exposure pathways, and the potential risk posed to receptors. The potential risk is further evaluated in the human health risk assessment (HHRA) and ecological risk assessments presented in Section 7 and Appendices C and P.

Based on the comprehensive site investigation, including several activities focused specifically on investigating potential sources, the data supports the conclusion that no active ongoing sources exist at the Site. As will be further discussed in this section, the likely historical sources of the regulated substances found in soils and/or groundwater include: historical fill material; former use and handling of lead (e.g., for lead piping); former coal and coal-based material use and storage; former CS_2 use/storage; activities which occurred after FMC ownership including uncontrolled equipment salvage (e.g., transformer salvage) and demolition operations and dumping/filling activities; and potential upgradient CVOC sources. Additionally, some of the inorganic regulated substances found in groundwater, i.e. manganese are likely naturally occurring in the native rock and soil/fill and their occurrence is being influenced by reducing conditions in the subsurface.

Further detail regarding the CSM is presented below and in Appendix R.

6.1 Site Description and Historical Operations

6.1.1 Site Description

The Site covers approximately 36 acres and is located in Marcus Hook Borough, which is in the southern portion of Delaware County, Pennsylvania as shown on Figure 1. The Site is bounded by East 10th Street to the north/northwest, Marcus Hook Creek to the east, and a Conrail rail line to the southeast and southwest as shown on Figure 2. The Delaware River is approximately one-half mile southeast of the Site. Portions of the former manufacturing building complex remain, although much of the complex has been demolished (after FMC's ownership). Remnants of the demolished structures, such as foundations, slabs, basements and corridors, remain at the Site. Light industrial and commercial tenants occupy the remainder of the buildings on Site.

6.1.2 Former and Current Site Use

FMC owned and operated the cellophane manufacturing facility from 1963 through 1977. FMC discontinued manufacturing operations and sold the property to MHDP in 1978. The Site was subdivided into 25 Lots (Figure 2). In 1986, lots 1,2,8-15, 17, 20-23 were sold to the MHBCC who conducted salvage operations. The ownership history is presented in detail in Section 2 and Table 1.

The Site is currently used for non-residential purposes, it is expected that the Site will continue to be used for non-residential purposes in the future. The surrounding land use is predominantly industrial and commercial mixed with residential areas. There are no residential areas located hydraulically downgradient from the Site.

6.1.3 Former FMC and Non-FMC Operations

As previously described in Section 2, the Site was initially operated as a viscose rayon manufacturing plant, changing over to cellophane production in 1946. . The storage and use of these chemicals occurred in various locations throughout the former manufacturing complex, as illustrated on Figure 3 and Table 1. Other major Site support operations included an on-site Power House and coal storage, acid reclamation operations, an incinerator, and WWTP.

After purchasing the Site in 1978, MHDP conducted salvage operations at the property. In 1986, much of the Site, including Lots 1, 2, 8-15, 17, 20-23, were sold to MHBCC, who continued the salvage operations at the Site. As discussed in Section 2, the USEPA found that between 1978 and 1990 that MHBCC improperly managed significant quantities of PCB-contaminated waste and asbestos as part of its equipment salvage and building demolition operations. Since the time of MHBCC operations, multiple tenants have occupied several of the buildings on-Site. These, primarily, have been in the former office buildings (Lots 1-3), the former packaging and shipping building (Lot 6), and the former maintenance building (Lot 18), which was utilized by Bucks County Recycling as a medical waste incinerator.

6.2 Physical Site Setting and Subsurface Structures

The following sections summarize the details of the physical site setting and subsurface structures as they pertain to the development of the Conceptual Site Model.

6.2.1 Topography

The Site is located in the Delaware River Drainage Basin, is relatively flat, and has a topographic relief ranging from approximately 35 feet above mean sea level (AMSL) in the northwest corner to approximately sea level along Marcus Hook Creek. The Site gently slopes down to the southeast toward the top of the creek bank, which has an elevation of approximately 18 feet AMSL. The creek bank slopes steeply down to Marcus Hook Creek, which is at approximately sea level. The Site topography is interrupted by the remaining former manufacturing buildings

and remnant structures, such as foundations, slabs, basements and corridors, and Penn Avenue, which bisects the Site.

6.2.2 Subsurface Structures

Subsurface structures (basements, tunnels, and sewers) were evaluated to assess whether or not they represent a source of contamination or contribute to contaminant migration as discussed in Section 5. FMC reviewed historical Site plans and documents, performed visual reconnaissance of the subsurface structures that were accessible, and collected water samples from two building basements (Lot 2 and Lot 6) and nine sewer manholes.

As described in Section 3, portions of the sewer system installed as part of the historical manufacturing operations, including storm sewers, sanitary sewers, and mill sewers, still exist at the Site. In addition, Marcus Hook Borough installed and currently maintains a storm sewer along Penn Avenue and a sanitary sewer through the eastern portion of the Site. The storm sewers discharge to Marcus Hook Creek. The sanitary sewers tie into the Marcus Hook sanitary main on Lot 12, which connects to the municipal wastewater plant in Chester, PA. The former mill sewers historically discharged to the on-Site WWTP located at Lot 24. Additional subsurface features include basements and portions of former utility corridors/tunnels, which are present primarily in the north central portion of the Site. The approximate locations of the sewer network and subsurface utility corridors and tunnels are shown on Figure 25.

The results of the sampling indicate that the basements and sewers are not an active source to Site groundwater contamination or contributing to the migration of contamination. As described in Section 5.3 and illustrated in the cross-section figures (Figures 35 through 39), the majority of manholes and sewers are located above the water table. In the few locations where they are located below the water table, the analytical data does not indicate that the sewers are acting as a conduit for contaminant migration. Nonetheless, these features were retained as potential preferential pathways for the VI assessment.

6.3 Potential Receptors and Exposure Pathways

Human and ecological exposure to Site soils were identified as potential receptors, which were further evaluated under the HHRA (Section 7.1 and Appendix P) and ecological risk assessment (Section 7.2 and Appendix C), respectively. A full evaluation of potential human receptors, including commercial/industrial worker, construction worker, utility worker, and trespasser, and exposure pathways is presented in the HHRA (see Section 7.3.1 and Appendix P).

Indoor air receptors were identified in the buildings on Lots 1, 5, and 6; the other buildings at the Site are unoccupied. Vapor intrusion risks from soil and groundwater to current and future receptors were assessed as part of the human health risk assessment without accounting for either future remedial actions or engineering/institutional controls. The current and future potential for groundwater use on and downgradient of the Site was evaluated. Potable water is provided by the Chester Water Authority to residential and non-residential properties in Marcus Hook and Trainer, PA. Marcus Hook does not currently have an ordinance in place

restricting the use of groundwater. However, it is FMC's understanding, based on conversations with officials from the Borough of Marcus Hook, that groundwater is not used for drinking or industrial purposes in Marcus Hook, and, as a result and as a practical matter, no ordinance was ever deemed necessary. A search of public well records using the Pennsylvania Groundwater Inventory System (PAGWIS) database verified that there are currently no wells used to provide water for potable, agricultural or industrial purposes on or downgradient of the Site (between the Site and the Delaware River). The PAGWIS record survey is provided as Attachment 2 to the HHRA in Appendix P.

Marcus Hook Creek is a surface water receptor identified at the Site. No wetlands or endangered species were identified at the Site. Three "sensitive species" were identified by the PNDI ER Tool to potentially occur within the project boundary or the project buffer applied by the review tool (within 0.5 miles of the Site boundary). Further inquiry to the Pennsylvania Fish and Boat Commission (PAFBC) identified the species as the Atlantic sturgeon (*Acipenser oxyrinchus)* (PA threatened), the shortnose sturgeon (*Acipenser brevirostrum)* (PA threatened), and the eastern redbelly turtle (*Pseudemys rubriventris*) (PA threatened). These species are discussed further in the ecological risk assessment in Section 7.2 and Appendix C.

6.4 Geological and Hydrogeological Conditions

6.4.1 Geology

The unconsolidated overburden at the Site is described as consisting of sands, silts, clays, and gravels and is typically 20 to 30 feet thick. A significant amount of anthropogenic fill has been placed throughout the Site since the Site was sold by FMC. The fill can be found from the surface to depths of 15 ft. bgs or deeper, and appears to have been placed in demolished building foundations and basements, areas where subsurface structures had been removed, for general grading, or simply dumped as discrete debris piles. Coal and coal-based material (e.g., chips, slag and ash) are present on the eastern side of the Site (Lots 8-12), generally coincident with the location of the former Power House operations. Soil boring logs indicate the presence of fill and/or coal-based material in many of the soil samples that had reported elevated concentrations of metals and PAHs.

The bedrock underlying the Site is the Wissahickon Formation (PGS, 1981), and is typically encountered at approximately 20 to 30 ft. bgs. In the region of the Site, the upper portion of the Wissahickon Formation is a saprolite, which grades to competent bedrock within approximately 25 to 50 ft. bgs. Groundwater flow in the Wissahickon Formation is essentially restricted to the saprolite layer and fractures in the underlying competent bedrock. Fractures are most abundant near the bedrock surface and appear to be absent deeper than 200 ft. bgs based upon the downhole geophysics and slow recharge observed in MW-IDD/I3 (235 ft. bgs).

6.4.2 Hydrogeology

Groundwater was observed beneath the Site in the overburden soils and within the bedrock. The top of the water table has been encountered at depths ranging from approximately 3 to 25 ft bgs. Seasonal fluctuations were observed, and transient localized mounding of overburden groundwater in less porous soils in response to precipitation infiltration also has been observed. Groundwater flow direction in both the overburden and bedrock are consistent, however, with flow towards the southeast in the eastern portion of the Site (toward Marcus Hook Creek) and generally towards the south in the western portion of the Site (toward Delaware River). Figures 7 and 8 show the groundwater elevation/potentiometric levels and interpreted flow direction in the overburden and bedrock, respectively, based on April 2018 measurements. The only well that appears to be tidally influenced is MW-CD, which is located approximately 50 feet from Marcus Hook Creek.

The average groundwater gradient was 0.0207 in the overburden and 0.0213 in the bedrock. The average calculated hydraulic conductivity in the overburden was about 0.05 ft/day. There are several areas of the Site where an upward vertical gradient exists, as shown on Figure S-1 (overburden) and Figure S-2 (bedrock) in Appendix R. The upward gradient has been observed between the overburden and the bedrock in the center of the site between MW-NS/MW-ND and MW-JS/MW-JD. An upward gradient between deeper bedrock and more shallow bedrock has also been observed in the C nest and the D nest located in the southeastern portion of the Site. These gradients do not change overall groundwater flow direction.

The average hydraulic conductivity in shallow bedrock (MW-AD, MW-DD and MW-LD) was 0.55 ft/day, which decreased to 1.5e-3 ft/day in deeper bedrock (MW-BD). The average groundwater velocity in the overburden is 1.7 ft/yr, in the shallow bedrock is 41.5 ft/yr and in the deeper bedrock is 0.11 ft/yr assuming a porosity of 0.25 for the overburden, and 0.1 for the bedrock (Freeze and Cherry, 1979).

The deeper bedrock aquifer has very low yields, as evidenced by very slow recharge/recovery and the extremely low purging rates that were necessary during ground water sampling. According to the USGS Water-Supply Paper 2346 *Geohydrology and Ground-Water Resources of Philadelphia, Pennsylvania* (G. Paulachok) unfractured fresh rock in the Wissahickon Formation have specific capacities of almost zero. Based upon the downhole geophysics performed for MW-I3 it appears that competent bedrock extends to about 200 ft bgs and unfractured fresh rock is encountered at about 200 ft bgs. Therefore, very little to no significant groundwater flow is expected to occur at the Site at depths greater than 200 ft bgs, which is confirmed by the conditions observed at MW-IDD/I3.

6.5 Evaluation of Geochemical Conditions in Groundwater

As part of the development of the CSM, FMC evaluated the geochemical conditions in groundwater. The geochemical evaluation is included in Appendix R and the conclusions of this evaluation are summarized below.

- There are no ongoing releases to groundwater and the observed COC trends are well understood and explained by the geochemical conditions and the Site history.
- The geochemical conditions in the subsurface, especially the reducing conditions in groundwater, support the ongoing degradation of the organic COCs. Increasing trends in organic COCs which are degradation products (e.g., 1,1-DCE) of parent compounds (e.g., TCE) were observed but are consistent with the expected degradation of the parent compound and the redox zones observed in groundwater. Any increasing organic COC trend is expected to stabilize and decrease over time based on the observed Site geochemistry and apparent ongoing degradation.
- The reducing groundwater conditions result in the mobilization of metals (i.e., manganese) from soils and bedrock. Metals dissolution in groundwater is dependent upon a combination of several geochemical parameters and therefore can be variable due to precipitation, seasonal variations in groundwater and reducing condition caused by biodegradation. The increasing manganese trends are not due to an ongoing source but rather geochemical conditions in the subsurface. It is expected that the manganese and other dissolved metals concentrations will decrease along the downgradient groundwater flow path as conditions become more oxidizing.

6.6 Potential Contaminants of Concern and Potential Source Areas

As discussed in Section 4.0 and 5.0, during the Site remedial investigation activities, soil and groundwater samples were analyzed for VOCs, SVOCs, Metals, PCBs, asbestos as well as several organic compounds that were reportedly used during historical operations. The following summarizes the potential contaminants of concern and potential source areas.

6.6.1 Soil Summary

The comprehensive RI surface soil data indicates that several regulated substances had reported concentrations above the respective non-residential direct contact MSCs. These were:

- Antimony
- Arsenic
- Lead
- Vanadium
- Aroclor 1260
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(k)fluoranthene
- Benzo(b)fluranthene

There are no other regulated substances in the surficial soils or in the subsurface soils (deeper than 2 ft. bgs) with reported exceedances of the non-residential direct contact MSCs (refer to Figure 32 and Figures 16-22).

Based upon the comprehensive RI soil sample results, the following regulated substances had reported concentrations above the respective non-residential soil-to-groundwater MSCs (refer to Figure 33):

- Antimony
- Arsenic
- Lead
- Vanadium
- Mercury
- Thallium
- 1,2,4-TCB
- Benzo(a)pyrene
- Naphthalene

TCE and PCE were detected above PADEP soil-to-groundwater MSCs in a sample collected from Lot 17 in 2010. Follow up soil sampling data from this same area (collected in 2015 and 2016) did not reveal any exceedances of these criteria for TCE or PCE. The most recent soil analytical data were utilized in this RI/RA evaluation.

The SVOCs and metals (benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluranthene, benzo(k)fluranthene, naphthalene, vanadium, antimony, arsenic, vanadium, lead, antimony, thallium and mercury) are attributed to the presence of fill, debris and coal related materials as shown on Figure 41. In addition, the former lead shop were located on Lot 15. The structures on Lot 15 were demolished subsequent to FMC ownership and demolition debris is present throughout the lot, but the lead in Lot 15 and in the adjacent lots is attributed to these former operations and the fill and debris.

PCB Aroclor 1260 was reported at concentrations above the SHS non-residential direct contact MSCs in surface soil samples. These Aroclor 1260 levels were detected at Lots 17 and 21, with the concentrations and extent in soils on Lot 17 more significant than found at Lot 21. USEPA determined that MHBCC's contractors conducted PCB transformer salvage activities on Lot 17 and surrounding area subsequent to FMC's ownership; USEPA found stained floors and soil, PCB wastes, and transformer carcasses in this area (*Preliminary Removal Assessment Report: Data Collection Summary,* EHRT, January 1991). The PCB contamination in Lots 17 and 21 is attributed to these past uncontrolled transformer salvage operations and poor waste management practices, which occurred subsequent to FMC's ownership.

There was only one 1,2,4-TCB detection above the soil-to-groundwater MSC in a sample from Lot 17, which may be attributed to a historical source in or around the building on Lot 17. As noted above, one of the 2010 soil samples (ESB-4) collected from Lot 17 also contained PCE and TCE above the soil-to-groundwater MSC, (note: samples collected from this area of Lot 17 in 2015-2016 did not contain CVOCs above MSCs). PCE and 1,2,4-TCB have been used as dielectric fluid in transformers, and TCE has been used to flush transformers (*Sources, Emissions for Trichloroethylene (TCE) and Related Chemicals*, USEPA Office of Research and Development, March 2001, USEPA 2001; *Issue Paper for Polychlorinated Biphenyl Characterization at Region 4 Superfund and RCRA Sites*, USEPA Region 4 Tech Services Section, February 2013, USEPA 2013). As noted above, USEPA identified that MHBCC's contractors used the building on Lot 17 for transformer salvage operations and waste storage. PCE and 1,2,4-TCB may have been present in the transformers as dielectric fluid, and TCE, as well as PCE, may have been used by the

contractors as a solvent to flush the transformers. As described in a letter from FMC to PADEP regarding Regulated Substances and Historical Site Processes and Chemical Use, dated June 18, 2014, TCE, PCE, and 1,2,4-TCB were not identified as chemicals used as part of the rayon and cellophane manufacturing process at the Site. Therefore, the former transformer salvage operations and associated generated wastes are believed to be the historical source of the chlorinated VOC contamination found in this area.

The former CS_2 storage moats and related operations located on Lots 16 and 19 were the likely historical source of CS_2 in soil. In 1981, FMC closed the CS_2 moat and associated tanks that were located on Lot 19, and FMC provided PADEP with closure related documents in a letter dated June 23, 2017. Closure activities included the following major steps: removing CS_2 and accumulated water, sediment/sludge; stabilizing remaining residuals with fly ash and lime; and capping the entire structure with concrete. Regarding the former storage area on Lot 16 and the southeast portion of Lot 19, interviews with a former Site worker and confirmatory boring data indicate that the USTs and former moat and associated tanks were excavated and removed. As summarized in Section 5.1.3 of this report, the data sufficiently characterize the horizontal and vertical extent of the soil impacts associated with the former CS_2 storage moat, and demonstrate that CS_2 concentrations were lower at depth below the subsurface structure.

The soil data demonstrates that there are no ongoing sources from soil. The direct contact MSC exceedances will be addressed in the HHRA in Section 7.0. The regulated substances detected above the soil-to-groundwater MSC that are also present in groundwater are further evaluated under the groundwater pathway presented below and the fate and transport evaluation (Section 6.7).

6.6.2 Groundwater Summary

The analytical results indicate that organic and inorganic regulated substances had reported concentrations in groundwater at concentrations above the SHS non-residential used aquifer MSCs. The regulated substances that have been reported at concentration above this MSC in the last eight quarters of sampling included CS_2, chlorinated organics (e.g., 1,1-DCE, TCE, PCE and 1,2,4-TCB), and metals (antimony, arsenic, beryllium, cadmium, cobalt, lead, manganese, nickel, selenium, thallium, vanadium, and zinc).

The results from all the groundwater sampling events are summarized on Plates 3 and 4; recent results are illustrated in cross-section on Figures 42, 43 and 44. The results also indicate that overburden groundwater samples did not exceed the SV_{GW}, but CS_2 had reported concentrations above SV_{GW} in bedrock groundwater samples from MW-FDD and MW-GD, and TCE is present at concentrations above SV_{GW} in MW-ID and MW-KD.

This section builds on the chemical and physical processes discussed in Appendix R and the former Site activities presented in Sections 2 and 3, and Figure 40 illustrates the conceptual site model.

The data indicates that there are no ongoing sources to groundwater. The groundwater pathway is evaluated further in the fate and transport analysis in Section 6.7 and the HHRA in Section 7.0.

6.6.2.1 Organics

Overburden and bedrock groundwater sample analytical results indicate that several organic constituents had reported concentrations above respective non-residential used aquifer MSCs as shown on Plate 3. Organic constituents with one or more reported concentrations above the respective MSC during the last eight consecutive quarterly events are described in the following sections.

Upgradient Area/Northern Area (Lots 1 and 2/Lot 23)

Groundwater samples collected from MW-AD, which is located on Lot 2 behind the former Main Office Building, have reported concentrations above MSCs of several chlorinated VOCs, including: PCE, TCE, cis-1,2-DCE, vinyl chloride, 1,1-DCE, 1,1,2,2-tetrachloroethane and 1,1,2-trichloroethane. Groundwater samples collected from L01 MW-5D, which is located along E. 10th Street, have reported PCE concentrations that are near or slightly above the MSCs, but 1,1-DCE, cis-1,2-DCE, TCE, PCA and 1,1,2-TCA were not detected above MSCs. The evaluation presented in Appendix R indicated a potential source area in Lots 1 or 2, or upgradient of these lots.

USEPA found that MHBCC handled, salvaged and staged PCB-containing transformers, transformer carcasses, and drums of wastes in various areas of the Site, including but not limited to the buildings on Lot 1 and Lot 3 (EHRT, 1991). As previously noted, chlorinated VOCs may have been used as insulating fluids in transformers, or may have been used as solvents to flush the transformers (USEPA 2001; USEPA 2013). In either event, the former transformer salvage operations and associated generated wastes are believed to be the historical source of the chlorinated VOC contamination found in this area. However, based upon available data, it does not appear there are on-going active sources of these chlorinated VOCs. Soil samples and overburden groundwater samples collected in this area did not have reported elevated concentrations of chlorinated VOCs. In addition, the Tobit statistical analysis also indicates that the concentrations in the wells on Lots 1 and 2 are stable or decreasing.

Groundwater analytical results from samples collected from MW-JS indicate the presence of 1,1-DCE, TCE, and PCE at concentrations above the respective groundwater MSCs. As discussed in Appendix R, the source of the concentrations in MW-JS are attributed to the migration of impacted groundwater from upgradient MW-AD, which may have been impacted from the former transformer salvage that was conducted on Lots 1 and 3. Due to the upward gradient the bedrock groundwater is migrating to MW-JS and increased concentrations correlate with the observed geochemical (weakly reducing conditions) and groundwater flow data (localized upward gradient) in the overburden groundwater in this area.

Eastern Portion of Site (Lots 10, 11, 12, and 13)

The groundwater sample analytical results obtained from the MW-BD, MW-C nest (MW-CD, MW-CDD, MW-C3), and MW-LD indicate the presence of 1,1-DCE at concentrations above the MSC along the eastern portion of the Site. Potential historical sources of CVOCs is believed to be related to salvage operations in this area, including transformer carcasses and drums of waste (EHRT, 1991) and the chlorinated solvents may have been used during the salvage activities (e.g., solvent for transformer flushing). While it may also be possible that 1,1-DCE could have been associated with the former cellophane coating operations, which used polyvinylidene chloride (polymerized 1,1-DCE), this seems less likely for several reasons. The coating operation was conducted on the west side of the Site (within Lots 6 and 20), not the eastern side of the Site where the 1,1-DCE groundwater impacts are observed. None of the soil samples collected at the Site (over 400 samples) had reported concentrations of 1,1-DCE above MSCs, nor did the groundwater samples collected from MW-NS/MW-ND (installed in the footprint of the former Coating Building). The lack of correlation between the historical operations and the analytical data suggests that the historical operations are not likely to have caused the observed impact along the eastern side of the Site. In either case, the soil and groundwater data indicates that there is no active on-going source of 1,1-DCE remaining at the Site. 1,1-DCE is not found in soils at concentrations above the direct contact or soil-to-groundwater MSCs.

Given the proximity to the Site boundary and to Marcus Hook Creek, fate and transport modeling was performed to evaluate groundwater discharge to Marcus Hook Creek. The fate and transport evaluation is presented below in Section 6.7.

Southern Portion of Site (Lots 14, 17, 24)

CVOCs have been detected at concentrations above the groundwater MSCs in wells located on Lots 14, 17 and 24, including the following: 1,1-DCE, PCE and TCE in MW-KD, MW-DD, MW-DDD, MW-ID, MW-IDD; vinyl chloride in MW-DD; and 1,2,4-TCB in MW-DS.

As described in Appendix R, a historical localized source for the PCE, TCE, vinyl chloride plume is apparent based on the data trends. The former transformer salvage operations that occurred on Lot 17 are the suspected historical source of the CVOCs (either directly or through degradation pathway), including PCE, TCE, vinyl chloride, 1,1-DCE and 1,2,4-TCB found in groundwater in this area. Potential historical sources could also be related to the former WWTP operation on Lot 24 (MW-ID and MW-IDD are located near and downgradient of the former wastewater treatment plant ponds) or subsequent (post-FMC) industrial operations on this parcel (e.g., commercial waste treatment facility, material storage). In any scenario, the soil and groundwater data indicate that there is no active on-going source, as discussed below.

The WWTP ponds were drained, solids were removed, and the ponds were filled and capped with soil in the late 1970s (*Site Inspection of FMC Marcus Hook*, NUS, 1991; *RCRA Facility Investigation Task V DRAFT RFI Report*, McLaren Hart, 1993). Recent sample results are consistent with this report. Soil samples collected from within and near the footprint of the former ponds did not have reported concentrations of regulated substances above direct contact or soil-to-groundwater MSCs. In addition, groundwater sample results obtained from the four overburden monitoring wells located on Lot 24 do not indicate the presence of TCE or

1,1-DCE in overburden groundwater in this area. As previously noted, the Tobit statistical analysis (Appendix L) indicates that 1,1-DCE, TCE, PCE and 1,2,4-TCB concentrations in groundwater in this area are stable or decreasing.

Given the proximity of these wells to the property boundary, fate and transport modeling was performed to evaluate the predicted extent of these constituents off Site. The fate and transport evaluation is presented below in Section 6.7.

Downgradient of Former CS_2 Storage Moat (Lot 19, 21, 22 & Lot 24)

Bedrock groundwater sample results obtained from monitoring wells MW-FDD and MW-GD indicate that CS_2 is present in groundwater above the MSC downgradient of the former CS_2 storage moat area. The downgradient groundwater monitoring demonstrates CS_2 is delineated at the Site boundary (MW-HD and MW-I nest) and decreasing trends are observed in groundwater for CS_2. The former CS_2 storage moats and related operations located on Lots 16 and 19 were the likely historical source of CS_2 in groundwater and, the soil and groundwater data indicate that the moat structure and underlying soil are not an active on-going source of groundwater contamination. Sections 4.1.1 and 5.1.1 summarize the investigation and closure information for this area. The closure of the moat structure, lack of significant CS_2 concentrations below or near the moat, and the lack of CS_2 detected in downgradient overburden groundwater samples demonstrate that the former CS_2 storage moat is not an active on-going source. The reducing geochemical groundwater conditions and decreasing CS_2 concentrations support the conclusion that CS_2 is being biodegraded in this area.

6.6.2.2 Inorganics

Overburden and bedrock groundwater sample analytical results indicate that several dissolved metals had reported concentrations above respective non-residential used aquifer MCSs as shown on Plate 4. Dissolved metals that were reported at concentrations above the respective MCS in more than one sample over the last eight consecutive quarterly events include the following:

- Antimony
- Arsenic
- Beryllium
- Cobalt
- Lead
- Manganese
- Nickel
- Thallium
- Vanadium
- Zinc

The most prevalent metal was manganese, which given its widespread occurrence in overburden and bedrock groundwater samples appears to be related to the geologic formation as discussed in Appendix R. The dissolved metals detected in the groundwater at the Site are, at least in part, naturally occurring or due to the placement of fill, and are influenced by the reducing conditions. Redox values, especially in the overburden, appear to increase along the downgradient edge of the Site, indicating that the mobility of the redox-sensitive metals will decrease along the groundwater flow path as conditions become more oxidizing.

Concentrations of other metals do not exhibit consistent temporal or spatial trends, which suggest that they may be attributable to leaching from fill material that is present throughout various portions of the Site (Figure 41). Due the proximity of inorganic results in monitoring wells in close proximity to the property boundary and Marcus Hook Creek, fate and transport modeling was performed to evaluate the predicted extent of these constituents off Site. The fate and transport evaluation is presented below in Section 6.7.

6.7 FATE AND TRANSPORT

6.7.1 Groundwater Discharge to Surface Water

Groundwater sample analytical results indicate that regulated substances are present at concentrations above SHS non-residential used aquifer MSCs in wells along the boundary with Marcus Hook Creek. It is likely that shallow groundwater in this area discharges to the creek. Due to this condition, site-specific numeric values for groundwater discharge to surface water were developed to assess threshold acceptable risk for this pathway.

This process involved a series of modeling steps using site-specific information to estimate the allowable groundwater discharge concentrations that would not cause an exceedance of the applicable surface water criteria (i.e., the lower of the PADEP Chapter 16/93 surface water standards and the Delaware River Basin Commission [DRBC] surface water quality criteria). Using this approach, site-specific groundwater numeric standards to be protective of surface water quality were calculated. The derivation of the site-specific groundwater numeric values are presented in detail in the HHRA, which is located in Appendix P.

As described in the HHRA, the recent groundwater sample analytical results for the downgradient point of compliance wells are below these numeric SSS, indicating discharge to Marcus Hook Creek (or River) is not a pathway of concern based on Site conditions.

6.7.2 Soil-to-Groundwater

Several regulated substances were reported at concentrations above the non-residential soil-to-groundwater MSCs, including antimony, arsenic, lead, manganese, thallium, vanadium, mercury, 1,2,4-trichlorobenzene, benzo(a)pyrene, naphthalene, and Aroclor 1260. Aroclor 1260 and mercury were not detected in any groundwater sample above the MSC over the last eight quarters of sampling; therefore, pursuant to 25 Pa. Code § 250.308(d), Aroclor 1260 and mercury meet the SHS for soil-to-groundwater through equivalency demonstration. TCE and PCE were detected above PADEP soil-to-groundwater MSCs in a sample collected from Lot 17 in 2010. Follow up soil sampling data from this same area (collected in 2015 and 2016) did not reveal any exceedances of these criteria for TCE or PCE. The most recent soil analytical data were utilized in this RI/RA evaluation.

Many of the remaining substances were not present in groundwater on or downgradient of the Lots where they were reported above soil-to-groundwater MSCs in soil; however, as further confirmation that the soil-to-groundwater pathway is not a concern, site-specific soil-to-

groundwater numeric screening levels were also calculated, as described below. The purpose of this evaluation was to evaluate whether or not these regulated substances are present in soils at concentrations that may result in the substances leaching from soil at concentrations greater than the site-specific groundwater numeric standards (developed as discussed in Section 6.7.1 and Appendix P).

Site-specific soil-to-groundwater numeric standards were derived for antimony, arsenic, lead, manganese, thallium, vanadium, 1,2,4-trichlorobenzene, benzo(a)pyrene, and naphthalene, based on the equations and default input parameters provided in 25 Pa. Code §250.308 and using the site–specific groundwater numeric standard (refer to Section 2.2 of the HHRA) as the target groundwater concentration (MSC_{GW}) in the standard equations.

For inorganic regulated substances, the site-specific numeric standard was calculated as:

$$MSC_{S\text{-}GW} = MSC_{GW} (K_d + \theta_w/\rho_b) * DF$$

where: MSC_{GW} = Site-specific groundwater numeric standard used as target ground water concentration (mg/L)

K_d = Soil to water partition coefficient (L/kg)

θ_w = Default water-filled porosity of soil (unitless)

ρ_b = Default Dry bulk density of soil (kg/L)

DF = Default dilution factor (100)

The calculated site-specific soil-to-groundwater values for regulated inorganic substances are presented in the table below.

DERIVATION OF THE SITE-SPECIFIC SOIL-TO-GROUNDWATER SCREENING LEVELS OF INORGANIC SUBSTANCES

Constituent	Target Ground Water Concentration (mg/L)	Kd (L/kg)	θw (unitless)	ρb (kg/L)	Site Specific Soil to Ground Water Standard (mg/kg)
Antimony	1.575	45	0.2	1.8	7,105
Arsenic	2.813	29	0.2	1.8	8,189
Lead	0.703	900	0.2	1.8	63,278
Thallium	0.068	71	0.2	1.8	484
Vanadium	28.125	1000	0.2	1.8	2,812,813

For organic regulated substances, the site-specific $MSC_{S\text{-}GW}$ was calculated as:

$$MSC_{S\text{-}GW} = MSC_{GW} ((K_{oc} * f_{oc}) + \theta_w/\rho_b) DF$$

where: MSC_{GW} = Site-specific groundwater numeric standard used as Target ground water concentration (mg/L)

K_{oc}	=	Organic carbon partition coefficient (L/kg)
f_{oc}	=	Fraction of organic carbon in soil (unitless)
θ_w	=	Water-filled porosity of soil (unitless)
ρ_b	=	Dry bulk density of soil (kg/L)
DF	=	Default dilution factor (100)

The calculated site-specific soil-to-groundwater values for regulated organic substances are presented in the table below.

DERIVATION OF THE SITE-SPECIFIC SOIL-TO-GROUNDWATER SCREENING LEVELS FOR ORGANIC SUBSTANCES

Constituent	Target Groundwater Concentration (mg/L)	Koc (L/kg)	f_{oc} (unitless)	Kd (L/kg)	θw (unitless)	*p*b (kg/L)	Site Specific Soil to Ground Water Standard (mg/kg)
1,2,4-Trichlorobenzene	9.844	1500	0.0025	3.75	0.2	1.8	3,801
Benzo(a)pyrene	0.00107	910000	0.0025	2275	0.2	1.8	243
Naphthalene	12.094	950	0.0025	2.375	0.2	1.8	3,007

The maximum Site soil concentrations for organic and inorganic regulated substances were compared to the Site-specific soil-to-groundwater values, as shown below.

COMPARISON OF THE MAXIMUM REPORTED SITE SOIL CONCENTRATION TO THE SITE-SPECIFIC SOIL-TO-GROUNDWATER SCREENING LEVEL

Constituent	Site Specific Soil to GW Screening Level (mg/kg)	Maximum Reported Site Soil Concentration (mg/kg)
Antimony	7,105	1,500
Arsenic	8,189	89.7
Lead	63,278	47,500
Manganese	1,647,311	2,260
Thallium	484	38.8
Vanadium	2,812,813	1,680
1,2,4-Trichlorobenzene	3,801	130
Benzo(a)pyrene	243	110
Naphthalene	3,007	74

No soil samples had reported concentrations above the soil-to-groundwater screening levels based on the site-specific groundwater standards, further confirming that leaching from soils is not a pathway of concern for the Site.

6.7.3 Groundwater Migration

Site analytical data demonstrate that Site groundwater meets the site-specific groundwater numeric standards in the downgradient point-of-compliance wells. As such, delineation to the "selected standard" in groundwater has been achieved in accordance with the requirements for site characterization in PA Code 250 §408(b)(2). However, to provide further refinement on the projected extent of VOCs, Quick Domenico modeling was performed to assess the expected extent of VOCs in groundwater, and to estimate the distance at which SHS non-residential used aquifer MSCs are attained. This modeling assumed a worse case condition (used the highest historical observed concentrations at the time of modeling for model calibration) and the models were run to plume stability in accordance with applicable PADEP guidelines. The parameters modeled did not exhibit increasing trends (note: as described in Section 5.2.3, although the Tobit statistical analysis indicated an increasing trend for 1,1-DCE in MW-BD, the concentration has remained relatively stable since 2004, and is suitable to use for this modeling evaluation). Wherever possible, site-specific inputs were used. These included average hydraulic conductivity for the overburden and bedrock aquifers based on slug testing, measured ground water gradients, and low estimates of porosity (2%) based on the very limited flow capacity through only narrow and infrequent secondary porosity features in the schist bedrock). A 50% lower fraction of organic carbon content than the recommended default was also used the bedrock since flow occurs primarily through bedrock downgradient of the wells in question. The lower porosity and fraction of organic carbon content values result in higher predicted groundwater velocities and less adsorption of VOCs with plume migration.

The modeling was calibrated based on actual Site groundwater concentrations. The most reliable calibration was available for the transects from MW-PS to MW-DS (overburden) and from MW-KD to the MW-D nest (bedrock), and further off-site to refinery well MW-97D. The calibration for TCE, PCE, and 1,1-DCE all indicated that relatively high horizontal and vertical dispersivity values are necessary to calibrate the plume curve to the observed concentrations. This is not unexpected given the downward vertical gradients observed in the overburden and bedrock at the modeled locations as well as the fracture control on groundwater flow. The decay constant (lambda) was also adjusted from the PADEP initial default value (as recommended by PADEP) to match the curve slope, especially along the downgradient portion of the plume. At several other locations, the opportunity for similar calibration was more difficult, since the wells in question (MW-ID and MW-CD) were located very close to the downgradient property boundary, and no deep wells were located downgradient along the plume axis to provide calibration points. However, the ratio of horizontal:lateral:vertical dispersivity as calibrated for MW-PS/MW-DS/MW-97D and MW-KD/MW-DD/MW-97D were utilized, which is appropriate given the overall similar geologic conditions. The calibration of MW-BD to refinery well MW-109D and MW-AD to the MW-J nest yielded very similar dispersivity ratios, further supporting the ratios used at MW-ID and MW-CD. The Quick Domenico model runs are provided in Appendix Q.

Figure 45 shows the predicted extent of VOCs in groundwater based on the Quick Domenico modeling. While the predicted extent of VOCs in groundwater do extend off-site in certain areas, they do not reach the Delaware River and are confined to within the limits of the

refinery. This is consistent with groundwater data reported for the refinery (*Sitewide Remedial Investigation Report for the Former BP Marcus Hook Refinery*, Sovereign Consulting Inc., 2011), which show that wells located downgradient of the modeled extent do not have reported concentrations of these substances above groundwater MSCs.

7.0 ACT 2 RISK ASSESSMENT

As detailed in the previous sections, a number of regulated substances have been noted to exceed non-residential soil and groundwater MSCs, and thus cannot be addressed under a Statewide Health Standard. FMC plans to address these substances via an Act 2 Site-Specific Standard which considers actual Site conditions and future engineering/institutional controls. To support this approach, a human health risk assessment has been completed to address the relevant pathways associated with the regulated substances exceeding the soil and groundwater MSCs. This risk assessment is provided as Appendix P to this report, and should be referred to for information relating to establishment and attainment to the Site-Specific Standards. Similarly, an Act 2 ecological evaluation has been completed for the Site to assess direct impacts to potential ecological receptors and habitats (Appendix C). Each of these elements are described below.

7.1 HUMAN HEALTH RISK ASSESSMENT

Pursuant to 25 Pa. Code § 250.602 a Human Health Risk Assessment was developed to evaluate whether the Site soil and groundwater pose an unacceptable risk to human health at the East 10th Street Site. The various media/pathways are addressed by either pathway elimination, derivation of Site-Specific numeric standards, or calculation of baseline risk based on current site data. The full risk assessment is presented in Appendix P to this report. A brief summary of the scope and results of the HHRA is provided below.

The dataset used for the HHRA includes soil and groundwater data from the recent comprehensive Remedial Investigation (RI), which was completed in 2016-2018. Regulated substances in Site soil and groundwater data that exceeded non-residential MSCs as presented in Sections 5.1.5 and 5.2.3, respectively, have been carried forward into this HHRA for assessment under a Site-Specific Standard. In summary, these include:

<u>Groundwater</u>

- 1,1,2,2-Tetrachloroethane
- 1,1-DCA
- 1,1,2-TCA
- 2,6-Dinitrotoluene
- Benzene
- TCE
- Cis-1,2-DCE
- Pentachlorophenol
- Benzo(g,h,i)perylene
- Arsenic
- Cadmium
- Cobalt
- 1,1-DCE
- Cis-1,2-DCE
- 1,2,4-Trichlorobenzene
- CS_2
- PCE
- Vinyl Chloride
- Benzo(a)pyrene
- Benzo(k)fluoranthene
- Bis(2-ethylhexyl)phthalate
- Beryllium
- Chromium
- Iron

- Lead
- Nickel
- Thallium
- Zinc
- Manganese
- Selenium
- Vanadium

Soil Direct Contact

- Lead
- Vanadium
- Aroclor 1260

Additional regulated substances, which did not exceed MSCs, were incorporated for evaluation as potential Contaminants of Potential Concern (COPCs) in the risk assessment based on additional data evaluation against more conservative screening levels depending on the media/pathway, as presented in the HHRA.

7.1.1 Groundwater

The relevant potential exposure pathways to impacted groundwater evaluated in the HHRA include discharge to surface water, groundwater use (direct contact/ingestion) and volatilization to indoor air for future non-residential workers, and volatilization from and direct contact in excavations/trenches for potential future utility/construction workers.

7.1.1.1 Discharge to Surface Water

Samples collected from point of compliance wells along the boundary with Marcus Hook Creek (particularly the MW-B nest and the MW-C nest) have had reported concentrations of regulated substances above the non-residential MSCs. Given the groundwater flow gradients and the short distance from these wells to the creek, it is presumed that overburden and shallow bedrock groundwater in this area of the Site discharges to surface water. Site-specific numeric values for groundwater discharge to surface water were developed in the HHRA (Appendix P) to assess threshold acceptable risk for this pathway. A series of modeling steps were undertaken to estimate the allowable groundwater discharge that would not cause an exceedance of the applicable surface water criteria (i.e., the lower of the PADEP Chapter 16/93 surface water standards and the Delaware River Basin Commission [DRBC] surface water quality criteria).

When comparing the recent eight consecutive quarters of groundwater data from the point of compliance wells (downgradient property boundary) to the SSS, all reported concentrations were below these standards with the exception of one result. Thallium was detected in MW-CS during the May 2016 event at 0.104 mg/L; however, this result appears to be anomalous and not reflective of current groundwater conditions. The subsequent seven quarterly samples collected from MW-CS (October 2016-April 2018) had only one reported detection of thallium (0.0377 mg/L in October 2016); the subsequent six quarterly samples were all reported as “not detected” (at detection limit of 0.0094 mg/L or lower). However, to further evaluate

attainment of the SSS, the 95% UCL of the mean for thallium was calculated for samples collected from MW-CS (see Appendix C). The 95% UCL of the mean is 0.044 mg/L, which is less than the SSS. Therefore, groundwater is compliant with the SSS for the groundwater to surface water discharge pathway.

Groundwater at the Site occurs in both the overburden and bedrock, typically at depths of five feet below ground surface or greater. There are no observed open water bodies or areas of standing water that are fed by groundwater on the Site. Thus, incidental direct contact to surficial groundwater discharge is not a complete pathway.

7.1.1.2 Commercial/Industrial Worker

The HHRA evaluated the current and future potential for groundwater use on and downgradient of the Site. Potable water is provided by the Chester Water Authority to residential and non-residential properties in Marcus Hook and Trainer, PA. A search of public well records using the Pennsylvania Groundwater Inventory System (PAGWIS) database verified that there are currently no wells used to provide water for potable, agricultural or industrial purposes on or downgradient of the Site (between the Site and the Delaware River). The PAGWIS record survey is provided as Attachment 2 to the HHRA in Appendix P.

Marcus Hook does not currently have an ordinance in place restricting the use of groundwater. However, it is FMC's understanding, based on conversations with officials from the Borough of Marcus Hook, that groundwater is not used for drinking or industrial purposes in Marcus Hook, and, as a result and as a practical matter, no ordinance was ever deemed necessary.

EPA's Corrective Action website and the PADEP Activity and Use Limitation (AUL) Registry were also reviewed to determine whether groundwater use restrictions were listed for the adjacent former BP Marcus Hook/Monroe Energy Trainer Refinery property, which is downgradient of the Site. Various AULs have been enacted for the refinery property including restriction on future residential use and a prohibition on groundwater use, which states "No water supply wells of any kind (including, without limitation, water wells used for drinking, bathing, or other human consumption purposes and water wells used for livestock, farming or irrigation) shall be installed or used on the Property…". These AULs were fully executed in April 2017 and recorded with the Delaware County Recorder of Deeds in June 2017.

The groundwater direct contact pathway is currently incomplete. Institutional controls (e.g., environmental covenant, ordinance), however, would be necessary to restrict future potable use of groundwater at the Site until such time that it is determined that groundwater does not pose an unacceptable risk.

Impacted overburden groundwater is not present in proximity to the few occupied buildings currently on-site; however, the potential for vapor intrusion from volatile substances in groundwater to occupied buildings could be a complete pathway in the future. For this reason, the site overburden groundwater data was screened and evaluated as part of the cumulative risk assessment to determine the risk posed by vapor intrusion. The results of the cumulative risk assessment are summarized in Section 7.1.3.

7.1.1.3 Construction Worker/Utility Worker

Future exposure of a construction worker within an excavation and a utility worker within a trench were evaluated. Though no subsurface construction activities have recently been noted at the Site, subsurface construction may occur in the future as part of site redevelopment. Overburden groundwater could pool in future excavations completed as part of future construction. Consequently, incidental direct contact, including inhalation, ingestion, and dermal contact with shallow groundwater was included as part of a hypothetical future construction worker and utility worker exposure scenarios in the human health risk assessment. The results of the cumulative risk assessment are summarized in Section 7.1.3.

7.1.2 Soil

Exposure risks to Site soils were evaluated via several potential exposure scenarios. The full details of the Site-specific risk assessment are presented in Appendix P. The pathways evaluated include:

Commercial/industrial worker – The Site is considered non-residential for current and future uses. Therefore, consistent with the PADEP exposure scenario for the development of the non-residential direct contact MSCs, a commercial/industrial worker scenario was deemed appropriate for a quantitative evaluation of potential Site-related risks.

Construction Worker – Future exposure to a construction worker within an open excavation typical for a footer or foundation slab construction was evaluated. Although no recent subsurface construction activities have been noted at the Site, this scenario may not be eliminated under future site usage assumptions.

Utility Worker - Future exposure to a worker within an trench typical for a utility line construction was evaluated. Although no recent subsurface utility line construction activities have been noted at the Site, this scenario may not be eliminated under future site usage assumptions.

Adult Trespasser – Occasionally, signs of trespassing have been observed at the Site. Therefore, potential risks posed to an adult trespasser were evaluated quantitatively.

Adolescent Trespasser – Because of the presence of a nearby school, potential risks posed to an adolescent trespasser were evaluated quantitatively.

The risks for each of these pathways were evaluated as part of the overall site quantitative risk assessment.

7.1.3 Cumulative Risk Assessment

A quantitative site-specific risk assessment for the sources/pathways associated with applicable exposure routes to relevant media has been conducted in accordance with Act 2 regulations (including but not limited to 25 Pa. Code § 250.602-605), and U.S. Environmental Protection

Agency (USEPA) guidance, where applicable, to demonstrate compliance with the Act 2 Site-Specific Standard. The risk assessment, included as Attachment P, contains a site characterization summary, an exposure assessment, toxicity assessment, risk characterization, and uncertainty assessment.

7.1.3.1 Exposure Pathways

Based on the current and anticipated future land use of the Site, the potential pathways for the various receptor populations evaluated as part of the RA include:

- Non-residential adult commercial/industrial workers (surface soil: 0 – 2 feet soils; potential vapor intrusion to future buildings from soils, overburden groundwater and measured soil vapor)
- Adult construction workers (surface and subsurface soil: 0 – 15 feet; overburden groundwater)
- Adult utility workers (surface and subsurface soils: 0 - 15 feet; overburden groundwater)
- Adolescent and adult trespassers (surface soil: 0 – 2 feet)

A complete evaluation of Site-related exposure pathways is presented in the HHRA and summarized on Figure 3 of the HHRA.

7.1.3.2 Exposure Assumptions

PA Act 2 default exposure factors were used, where available, for calculating COPC-specific chronic daily intakes (doses) for the receptors and pathways selected for quantitative evaluation in the HHRA. Because Act 2 defaults are not available for adolescent trespasser or construction worker and utility worker populations, USEPA recommended values and/or values based on professional judgment were used to estimate chronic daily intakes (CDIs). Exposure frequency for commercial/industrial workers was also adjusted to account for actual expected weather conditions based on historical meteorological data for the area of the Site. A summary of exposure equations, values and assumptions can be found in Section 3.4 of the HHRA.

7.1.3.3 Exposure to Lead

Risk from exposure to lead was evaluated using USEPA's Adult Lead Model (ALM) with a risk management value of 10 µg/dL for the target lead blood level in a fetus (fetal PbB). The EPA default exposure frequency for a commercial/industrial worker was used in the model. All other model parameters were also based on USEPA default values from NHANES 2009-2014 (USEPA 2017). The ALM was also used to evaluate construction worker exposure to lead in surface and subsurface soil (0 – 15 feet). Because there is no indoor exposure associated with the construction worker scenario (as there is for the commercial/industrial work), the exposure frequency used in the model for the construction worker was set to equal 5 days/week for 6 months (120 days/year), consistent with the exposure factors outlined for construction worker exposure to soil. In addition, the ingestion rate of soil was increased to reflect the contact-intensive nature of construction worker exposure. The ALM is not suitable to assess trespasser

or utility worker scenarios due to the corresponding low exposure frequencies. Given the longer exposure frequencies under the commercial/industrial worker and construction worker scenarios, ALM modeling of these scenarios serve as conservative, worst-case assessment of potential risk due to lead in soil.

The ALM provides a methodology for assessing risks associated with non-residential adult exposures to lead in soil. The methodology focuses on estimating fetal blood lead concentrations in women exposed to lead-contaminated soils and provides a tool for evaluating risks of elevated blood lead concentrations among exposed adults.

7.1.3.4 Toxicity Assessment

This section of the HHRA presents toxicity values and information that relate COPC exposure (dose) to anticipated health effects (response) for each COPC retained for quantitative evaluation in the HHRA. Toxicity criteria derived from dose-response data are used in the characterization of risk to estimate the non-carcinogenic hazards and carcinogenic risks associated with exposure to these COPCs. Toxicity criteria used in this HHRA were obtained from the PADEP website, as provided in Table 5a (organic compounds) and Table 5b (inorganic compounds) (https://www.dep.pa.gov/Business/Land/LandRecycling/Standards-Guidance-Procedures/Pages/Statewide-Health-Standards.aspx, accessed on-line January 2019). The USEPA's on-line RSL calculator tool was used to obtain subchronic non-cancer toxicity values. Consistent with USEPA guidance, subchronic non-cancer toxicity values were used preferentially over chronic values, where available, for the evaluation of the utility and construction worker populations given the shorter exposure duration ($\leq$ 1 year) for these receptors.

The following sources provided current reference doses, reference concentrations, cancer slope factors or unit risk factors:

1. Integrated Risk Information System (IRIS)
2. United States Environmental Protection Agency, National Center for Environmental Assessment (NCEA) Provisional Peer-Reviewed Toxicity Values (PPRTV)
3. Other sources:
    a. Health Effects Assessment Summary Tables (HEAST);
    b. Agency for Toxic Substances and Disease Registry (ATSDR) Toxicological Profiles;
    c. California EPA, California Cancer Potency Factors and Chronic Reference Exposure Levels; and
    d. EPA criteria documents, including drinking water criteria documents, drinking water health advisory summaries, ambient water quality criteria documents and air quality criteria documents.

7.1.1.5 Risk Characterization

The Risk Characterization integrates data developed from the Exposure Assessment and Toxicity Assessment to derive numerical estimates of non-carcinogenic hazards and carcinogenic risks. Hazard and risk attributable to site COPCs were assessed for each potential exposure medium (e.g., soil, groundwater, air) for each receptor population. The goal of the Risk Characterization is to quantify the increased probability of developing cancer or experiencing an adverse chronic non-carcinogenic effect as a result of exposure to Site-related COPCs. The risk information is ultimately used in evaluating the necessity for remedial action at a site.

The quantitative risk estimates show that cancer risk is above the acceptable risk range (between one in 10,000 and one in 1,000,000) for non-residential commercial/industrial workers as a result of direct contact with Aroclor 1260 in surface soil (CR > 1.0E-04). Modeling of VI risk from soil shows that the non-carcinogenic hazard is greater than the acceptable threshold of one (1.0) for non-residential commercial/industrial workers as a result of 1,2,4-trichlorobenzene and naphthalene in soil, and that cancer risk is above the acceptable risk range for 1,4-dichlorobenzene and naphthalene. Cancer risks for all other exposure scenarios including adolescent trespassers (CR = 2.1E-05), future utility workers (CR = 6.5E-07) and future construction workers (CR = 6.4E-06) are all within the acceptable cancer risk range, and non-carcinogenic hazards for these scenarios are also all below 1.0.

The results indicate that action to address Aroclor 1260 in soil is warranted to reduce cancer risk associated with direct contact by non-residential commercial/industrial workers. Action is also required to confirm or reduce the potential vapor intrusion risk to non-residential commercial/industrial workers resulting from 1,2,4-trichlorobenzene, 1,4-dichlorobenzene and naphthalene in soil.

Characterization of Risk from Lead

The ALM results for the non-residential commercial/industrial worker and construction workers indicate the probability that fetal PbB will exceed the target PbB is less than the target probability of 5%. Therefore, risk from lead in soil at the Site meets acceptable thresholds. As noted above, the commercial/industrial worker and construction worker scenarios are considered a more conservative estimation of risk than for the trespasser and utility worker exposure to lead in soil. Consequently, lead in soil at the Site does not pose an unacceptable hazard.

7.1.4 Uncertainty

The carcinogenic risk and non-carcinogenic hazard estimates presented in the HHRA are not intended to be calculations of absolute risk or hazard to individuals who may use the site currently or in the future. Uncertainties can prevent the exact determination of risk to receptor populations. The goal of the HHRA was to provide reasonable, conservative risk estimates to guide decision-making.

Risk is broadly a function of exposure and toxicity. Therefore, uncertainties in characterizing either of these cause inaccuracy in risk estimates. Specific sources of uncertainty can be divided into two groups: methodological and site-specific. The major sources of methodological uncertainties come from uncertainties associated with toxicological information and exposure assumptions (e.g. vanadium toxicity). For site-specific uncertainties, professional judgement used to determine conservative exposure conditions for the site-specific receptors is the primary source of uncertainty. Data issues such as compounds present at a very low rate of detection also present uncertainty and result in an over-estimation of risk. A full description of uncertainties and their potential effects on final risk estimates is provided in the HHRA (Appendix P, Section 6).

7.2 ECOLOGICAL EVALUATION

Pursuant to the requirements for ecological evaluations set forth in 25 Pa. Code 250.402(d), and Section IV H of the Act 2 Technical Guidance Manual, an Ecological Evaluation was developed to assess direct impacts to potential ecological receptors and habitats (Appendix C). In accordance with such requirements, the Ecological Evaluation contains a preliminary screening for potential impacts to ecological receptors, and addresses the ecological evaluation requirements under the SSS. More specifically, Act 2 Ecological Evaluations are generally conducted in accordance with the ecological conceptual site model, which evaluates the presence or absence of receptors and potential exposure pathways in assessing ecological risk. This section summarizes the Ecological Evaluation presented in Appendix C.

7.2.1 Ecological Receptor Evaluation

To assess the potential for ecological receptors to be impacted by Site-related substances, both an on-Site evaluation and review of the PNDI Environmental Review Tool were completed.

The Site can be generally characterized as industrial and highly developed; however, there are some early to mid-successional communities in some areas. While the developed areas likely only support transient species, the early to mid-successional areas are expected to provide some limited habitat for wildlife species. The on-Site evaluation confirmed the presence of common wildlife, including gray squirrels (*Sciurus carolinensis*), raccoons (*Procyon lotor*), white-tailed deer (*Odocoileus virginianus*), eastern cottontail (*Sylvilagus floridanus*), various bird species, and one reptile, the introduced red-eared slider (*Trachemys scripta elegans*).

Although no wetlands were found at the Site, Marcus Hook Creek, a third order stream, runs along the eastern boundary of the Site and drains a watershed with a mixed industrial/commercial and residential land use. The creek is extensively channelized and receives the neighboring refinery's wastewater discharge, which has a permitted thermal limit of 110° Fahrenheit. During normal operation permitted refinery discharges contribute approximately 95% of the flow in Marcus Hook Creek (Sovereign Consulting 2009). In November 2017, the water temperature in Marcus Hook Creek downstream of the refinery's discharge flume was measured at 91.3°F. The portion of Marcus Hook Creek that borders the Site does not support aquatic life goals established by relevant governmental authorities, due in part to the elevated temperature, high flow variability due to storm water runoff, stream bank hardening, urban runoff, and minimal vegetated riparian buffer.

As required under Act 2, the on-line PNDI Environmental Review Tool was utilized to obtain information related to potential ecological receptors of concern. Three species were listed by the Pennsylvania Fish and Boat Commission (PAFBC), two endangered and one threatened. The PAFBC identified three species "known from the vicinity of the project" (Appendix B). These are the eastern redbelly turtle (*Pseudemys rubriventris*) (PA threatened), the Atlantic sturgeon (*Acipenser oxyrinchus*) (PA Endangered), and the shortnose sturgeon (*Acipenser brevirostrum*) (Federal Endangered; PA Endangered). Because of species-specific habitat requirements and the high water temperature within Marcus Hook Creek, it is highly unlikely that any of these species occur in Marcus Hook Creek (see Appendix C).

7.2.2. Evaluation of Migration/Transport Pathways

No species of concern or habitats of concern have been identified on the Site, and it is reasonably anticipated that this will not change in the future given the industrial land use on and around the Site. In addition, Marcus Hook Creek does not provide suitable habitat to support species of concern due to the elevated water temperature, poor substrate conditions[i] and the general nature of urban impacts. Therefore, there are no receptors of ecological concern expected to be at the Site. Nonetheless, for completeness, the potential completed exposure pathways were evaluated.

As discussed in the Ecological Evaluation (Appendix C), limited areas of the Site (less than ~20% of the Site) support habitat suitable for limited use by ecological receptors. Extensive sampling that has been completed within the Site identified elevated concentrations of regulated substances in some areas, thus there is a potential for ecological exposure to Site-related substances under current and potential future conditions. The potential migration pathways associated with soil and groundwater include direct contact with soil, groundwater discharge to surface water, and sediment.

Ii The habitat in Marcus Hook Creek primarily consists of dark silt and muck in some areas, and steeply graded clayey fines as a result of channeling in other places. Occasional concrete slabs and other anthropogenic material are also commonly found in the waterway.

Soils

The majority of the Site (~65%) is currently covered by buildings, concrete, asphalt, or other impervious coverings and does not provide suitable habitat for ecological receptors. The remaining ecologically relevant portions of the Site are small and surface soil exceedances in these areas are confined to: 1) disturbed areas (e.g., Lot 24); 2) areas with substantial surface fill (e.g., Lot 21); and areas that contain the remnants of foundations (e.g., Lot 11), roads (e.g., Lot 15) and other structures as shown on Figure 41.

Groundwater Discharge to Surface Water

Groundwater is not a complete exposure pathway for ecological receptors at the Site. The only complete groundwater exposure pathway for ecological receptors is the groundwater to surface water pathway, with the potential exposure point being the Marcus Hook Creek. As discussed in detail in the HHRA (Appendix P) and Section 7.2.3 above, SSS for groundwater were calculated for metals, SVOCs, and VOCs that exceeded non-residential groundwater or soil-to-groundwater MSCs to assess this exposure pathway. These SSS were developed to be protective of both human and ecological receptors within Marcus Hook Creek. Site groundwater concentrations for these constituents were below these levels, indicating groundwater discharge is not expected to adversely affect ecological receptors.

Sediment

Overall, the sediment analytical results are indicative of an urban waterway significantly impacted by regional anthropogenic activity. As noted in Appendix C, the maximum concentrations of many constituents in sediment samples collected adjacent to the Site were lower than those found in sediments collected downstream of the Site. Addressing Marcus Hook Creek sediments would not provide net ecological benefit; remediating the sediments would result in significant disturbance and, subsequently, the sediments would likely be re-impacted due to the industrial setting of the Marcus Hook Creek drainage area and the tidal action transporting contaminated sediment upstream.

8.0 SUMMARY AND CONCLUSIONS

8.1 RI/RA Findings

FMC completed the RI/RA for the Site in accordance with the COA and PADEP-approved scopes of work, and consistent with the PA Act 2 regulations and technical guidance. The purpose of the RI/RA was to characterize the current Site conditions and evaluate the potential risk associated with these conditions to determine if remediation is warranted. A high-level summary of the results and findings is presented below:

- Soils: FMC collected and analyzed over 300 soil samples during the recent remedial investigation. Regulated substances reported above non-residential direct contact and/or soil-to-groundwater MSCs included PAHs (such as benzo(a)pyrene), several metals (antimony, arsenic, lead, manganese, mercury, thallium, vanadium), and Aroclor 1260. The contamination appears to be related to historical activities occurring after FMC's ownership, including the MHBCC transformer salvage and demolition operations, and anthropogenic fill material (e.g., demolition debris, coal ash, etc.).
- Groundwater: FMC conducted 19 groundwater sampling events since 2004, including eight consecutive quarterly events from 2016-2018. Several organic and inorganic regulated substances were detected in one or more monitoring wells at concentrations above their respective non-residential used aquifer MSC, including CS_2, chlorinated organics (e.g., 1,1-DCE, TCE, PCE, 1,2,4-TCB), and metals (antimony, arsenic, beryllium, cadmium, cobalt, lead, manganese, nickel, selenium, thallium, vanadium, and zinc). The nature and extent of concentrations suggest more localized and discontinuous areas of impact rather than a large, site-wide plume. The contamination appears to be related to historical activities including the CS_2 storage and handling operations, the MHBCC transformer salvage and demolition operations, and the geologic conditions and anthropogenic fill material (e.g., demolition debris, coal ash, etc.). Sample results and trends indicate the likely historical source areas for the organic regulated substances are not active nor continuing to contribute contaminant mass. While several VOCs exceed non-residential MSCs at the downgradient property boundary, stable or decreasing concentrations are modeled to attenuate to the MSCs within the refinery property to the south and there are no downgradient groundwater users within this area.
- Basements and sewer network: The basements and sewer system sample results do not suggest these are an active source of contamination or a significant contaminant migration pathway.
- Marcus Hook Creek: The surrounding urban/industrial setting and the permitted high-temperature discharge from the neighboring refinery materially influence the conditions of Marcus Hook Creek. The sample results indicate the presence of organic and inorganic constituents common to urban waterways, and are generally consistent with samples collected from downstream sections of the Creek and the Delaware River.

An overall summary of the media addressed as part of this RI/RA, the pathways assessed for each, site-specific considerations, and whether risk is within acceptable ranges for the media/pathways is presented in the table below.

Medium	Pathway/Scenario	Pathway Complete	Site Specific Standard Consideration	Risk within Acceptable Limits
Groundwater	Groundwater Use	No	- No current users - Institutional Controls to restrict future use - Groundwater use restriction currently in place for downgradient refinery property	Yes, with institutional controls restricting future groundwater use on Site
	Vapor Intrusion to Commercial/Industrial Workers	Not currently, but may be with re-development	- - Contribution to carcinogenic risks within acceptable range Contribution to non-carcinogenic risks below threshold of concern	Yes
	Exposure to Construction Worker in Excavation	Yes	- Contribution to carcinogenic risks within acceptable range - Contribution to non-carcinogenic risks below threshold of concern	Yes
	Exposure to Utility Worker in Trench	Yes	- Contribution to carcinogenic risks within acceptable range - Contribution to non-carcinogenic risks below threshold of concern	Yes
	Discharge to Surface Water	Yes	- Site-specific numeric standards protective of surface water - Attainment with site-specific numeric standards	Yes
Soil				
	Non-Residential Worker	Yes	- Carcinogenic risks are above acceptable range as a result of direct contact with Aroclor 1260 in soil and possible future vapor intrusion into indoor air of naphthalene and 1,4-dichlorobenzene from soil - Non-carcinogenic hazard is above acceptable threshold as a result of possible future vapor intrusion into indoor air of 1,2,4-trichlorobenzene and naphthalene from soil - Lead meets the site-specific standard that is based on EPA's Adult Lead Model	No

	Trespasser	Yes	- Carcinogenic risks within acceptable range - Non-carcinogenic risks below threshold of concern	Yes
	Construction Worker	Yes	- Carcinogenic risks within acceptable range - Non-carcinogenic hazard below threshold of concern	Yes
	Utility Worker	Yes	- Carcinogenic risks within acceptable range - Non-carcinogenic hazard below threshold of concern	Yes
	Soil-to-groundwater	Yes	- Site-specific screening values developed based on site-specific groundwater standards (groundwater discharge to surface water) - Compliance with site-specific screening values	Yes

Based upon the human health and ecological risk assessments, the only completed pathways that pose a potential unacceptable risk for soil are: commercial/industrial worker direct contact to Aroclor 1260 in surface soils near where MHBCC transformer salvage operations occurred on Lot 17; and potential future vapor intrusion risk from soil on portions of Lots 4, 11, 12, 17, 22, and 24

Although groundwater discharge to Marcus Hook Creek is a complete exposure pathway, fate and transport modeling indicate that this pathway does not pose an unacceptable human health or ecological risk. The groundwater direct contact pathway is currently incomplete as there are no known potable or industrial use of groundwater on or downgradient of the Site.

8.2 Next Steps

In accordance with the COA, FMC is applying a combination of Act 2 standards, including SHS and SSS, to address the regulated substances identified in soil and groundwater. Delineation and evaluation of the vertical and horizontal extent of contamination above the selected standards in soil and groundwater, as required under §250.408(b), is complete.

FMC will submit a Cleanup Plan (identified as “Remediation Plan” in the COA) following PADEP approval of this RI/RA Report. The Cleanup Plan will present a remediation plan and schedule to address the two areas of Aroclor 1260 impacts in surface soil on Lot 17 and assessment protocols/institutional controls to address potential future vapor intrusion risk from soils on Lots 4, 11, 12, 17, 22, and 24. These measures are intended to attain the combination of Act 2 standards presented in this RI/RA Report. The Cleanup Plan will also provide proposed language for site use restrictions to be included in environmental covenants necessary to

mitigate future general exposures, including non-residential site use and a restriction on groundwater usage. As required in the specific COA language, FMC will also submit to PADEP within 30 days of submitting the Cleanup Plan a Notice of Intent to Remediate that describes any remedial actions FMC proposes to perform.

With respect to groundwater, the results obtained from the recent eight consecutive quarterly groundwater monitoring events adequately characterize groundwater and, except at MW-JS, meet the attainment requirements for groundwater in 25 Pa Code §250.704(d), including:

1) There is adequate spatial monitoring of the plume upgradient, which indicates a decreasing concentration trend toward the downgradient property boundary. As noted, MW-JS (an interior well) indicates an apparent increasing trend (albeit with low concentrations) that warrants further monitoring to evaluate whether or not the trend stabilizes.
2) Parameters affecting the fate and transport of regulated substances within the plume have been fully evaluated.
3) Concentrations of regulated substances in the plume at the point of compliance monitoring wells along the downgradient property boundary are all less than or equal to the groundwater SSS or the limit relating to the PQL, whichever is higher, in all samples collected during the quarters of monitoring.
4) There are no ongoing or active sources of contamination.
5) The age of the plume is sufficiently well known to permit a judgment to be made regarding its stability.

Accordingly, FMC is proposing to PADEP that this dataset is adequate and appropriate to demonstrate attainment of the groundwater SSS, but it is recommended that additional activities related to groundwater sampling be undertaken based on discussions between PADEP and FMC in May 2020. These include:

- Reduced sampling events are proposed to be completed on a semi-annual basis, which is allowable since closure under a Site-Specific Standard for substances exceeding non-residential MSCs in groundwater is being pursued. The semi-annual groundwater sampling will be performed for chlorinated VOCs at MW-JS and associated downgradient wells (B-nest, C-nest, D-nest) to verify stable and decreasing trends and assure that the groundwater SSS is attained at the point of compliance wells.
- Closer to submitting the Final Report, a more robust sampling round to support attainment demonstration will need to be completed. This will include the full network of Site monitoring wells for the similar list of analyses as was performed for the sampling completed for the RI between 2016 and 2018.
- A waiver request under 250.704(d) will be prepared by FMC and reviewed by PADEP, to document consistency with the 2016-2018 data and confirm that no additional attainment sampling is required.

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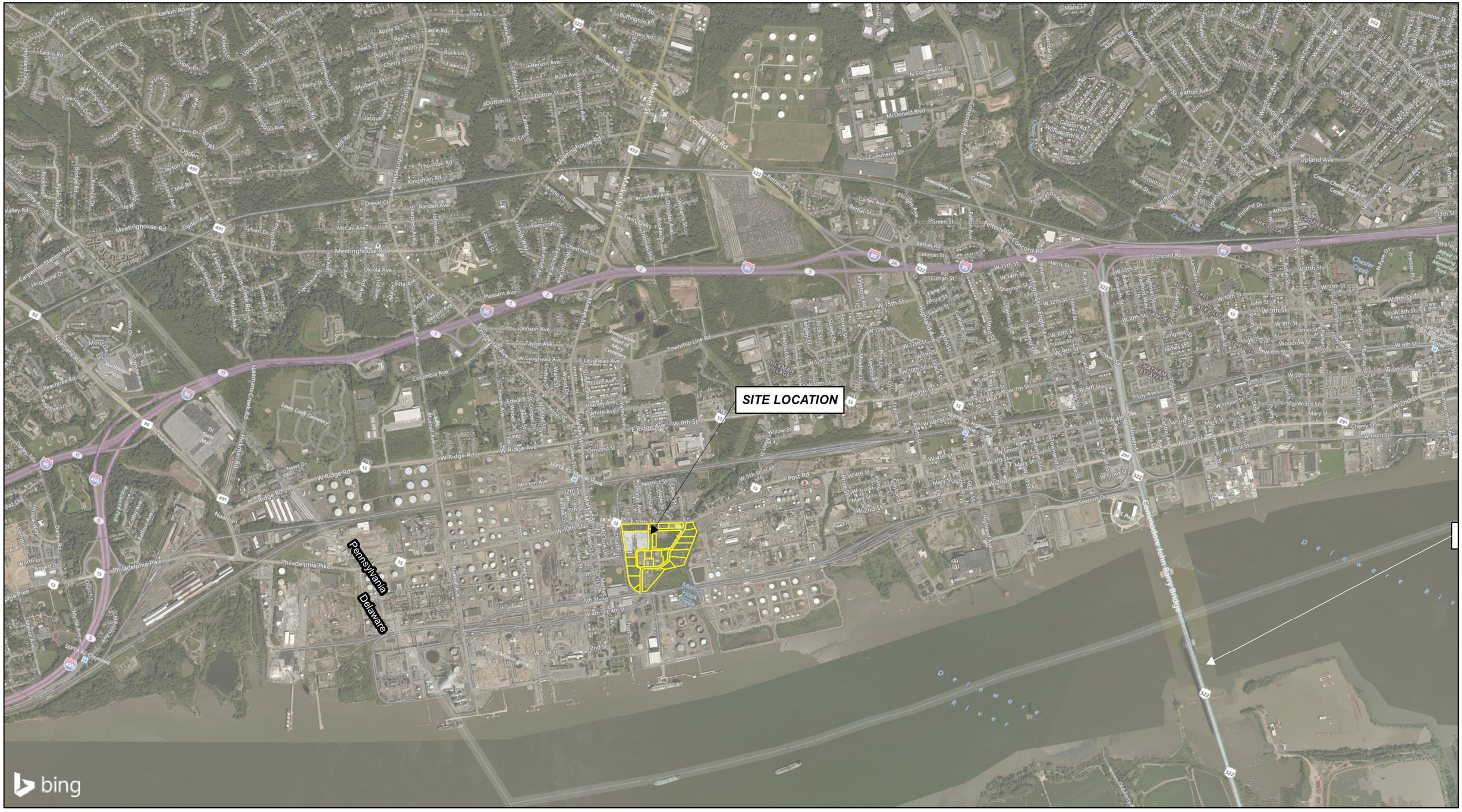
United States Army Corps of Engineers (USACE). 2013. Final Environmental Assessment Delaware River Main Channel Deepening Project Delaware Bay Economic Loading, Mechanical Dredging And Placement Of Dredged Material At The Fort Mifflin Confined Disposal Facility.

Figures



Environmental Resources Management, Inc.
Philadelphia Office
484-913-0300

ERM

January 28, 2015

N
W
E
S

Scale in Feet

0 2,250 4,500 Feet

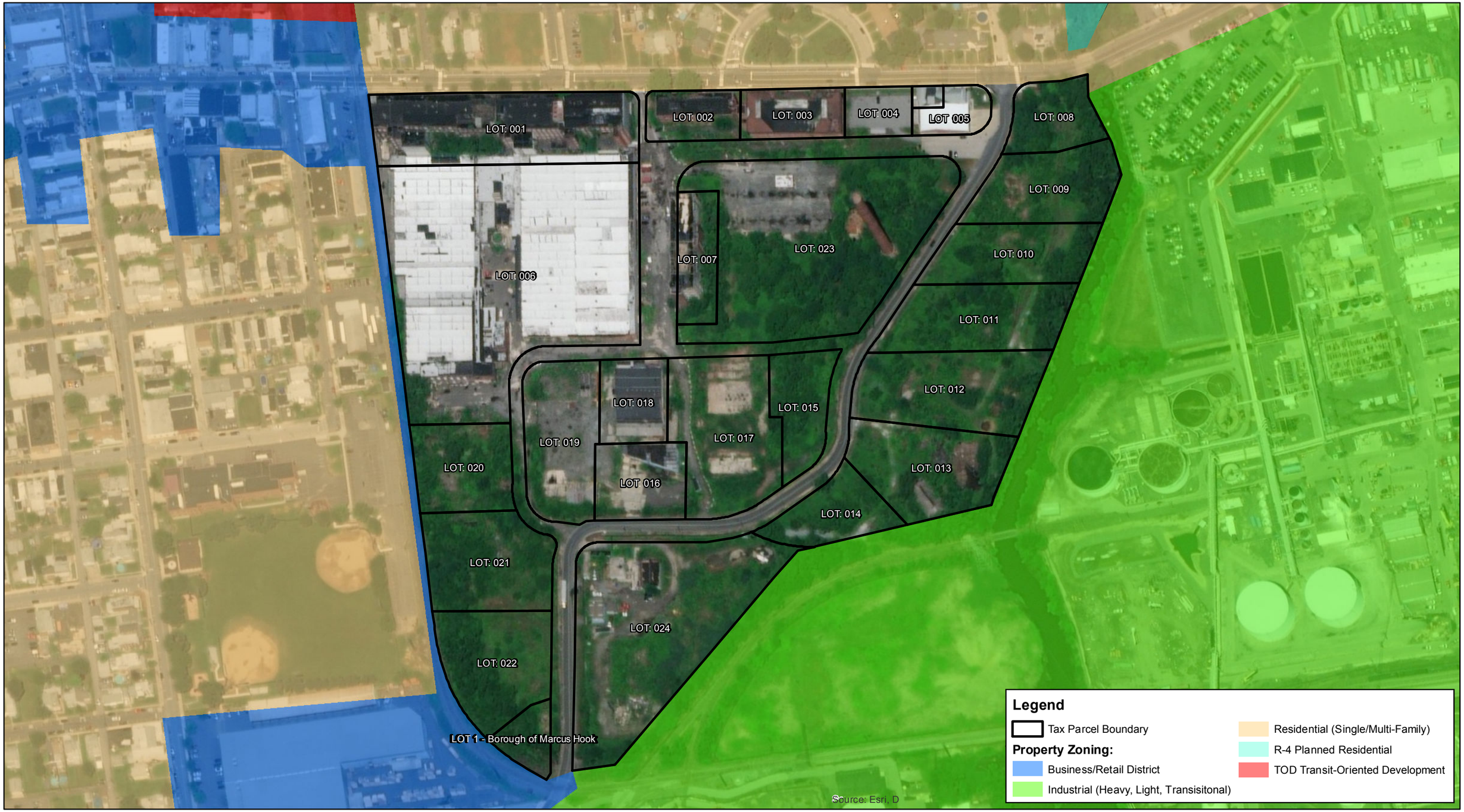
Source: Delaware County, PA

Legend

Tax Parcel Boundary

FIGURE 1
Site Vicinity Map
East 10th Street, Marcus Hook, PA
Delaware County, PA

J:\GIS\Projects\FMC-MarcusHook_MXD\Figure1-SiteVicinityMap_SiteLoc.mxd - 2/9/2018|SRV



Environmental Resources Management, Inc.
Philadelphia Office
484-913-0300
July 9, 2018

N W E S

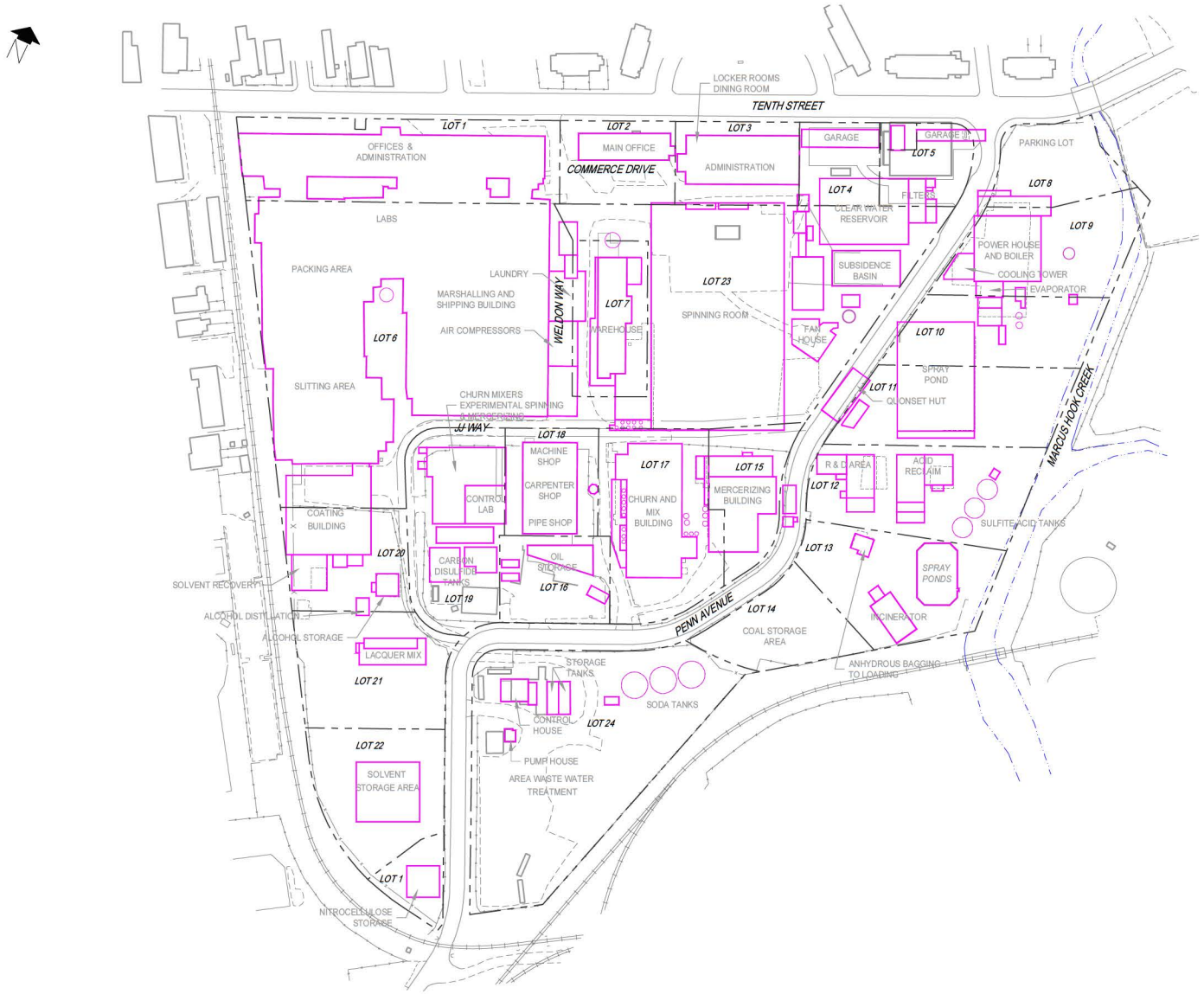
Scale
1 inch = 200 feet
0 175 350 Feet

NOTES:
1. Delaware County, PA Zoning Adopted October, 2005
2. Property zoning categories have been generalized for clarity and limits are approximate.

FIGURE 2
Lot Location Plan and
Surrounding Property Zoning
East 10th Street Site
Marcus Hook, PA

J:\Projects\FMC-Marcus Hook_MXD\Conceptual Site Models\FINAL_FEB2018\FIGURE2-AdjacentPropertyUse_MarcusHook_20171120.mxd - 7/10/2018|SRV

FIGURE 3
HISTORICAL SITE USE
EAST 10th STREET SITE
MARCUS HOOK, PENNSYLVANIA



LEGEND

- PROPERTY BOUNDARY
- CREEK
- FOUNDATION
- FENCE
- RAILROAD

PINK OUTLINE: INDICATES HISTORICAL FEATURE OR BUILDING

GREY TEXT: DENOTES HISTORICAL FEATURE OR BUILDING USAGE

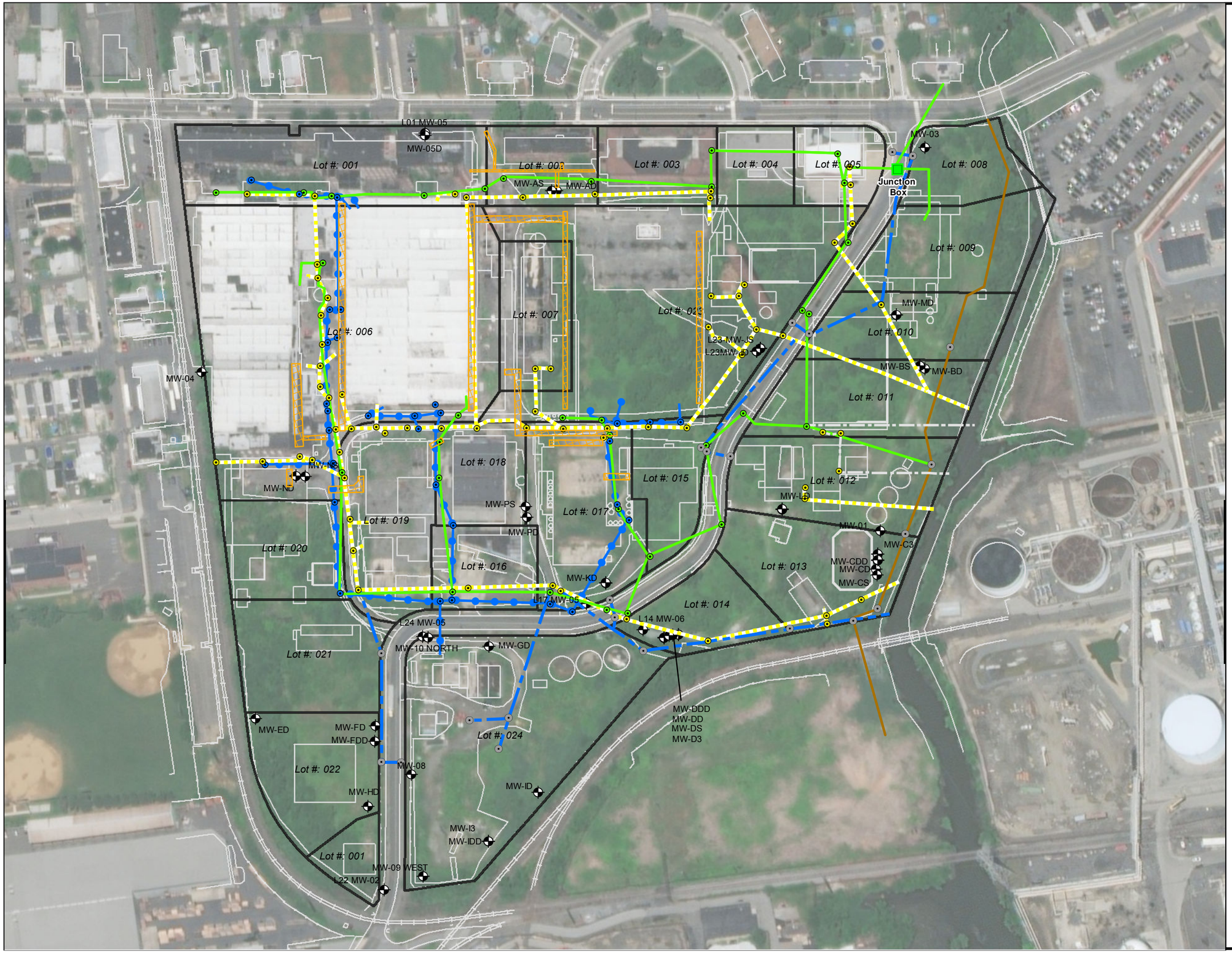
NOTE:
ERM PREFIX WAS NOT INCLUDED ON SAMPLE ID'S DUE TO LIMITED SPACE.

200 100 0 200
SCALE IN FEET

ERM

Q:\CAD\Drawings\FMC_Marcus Hook\0281149\A203_B.dwg

SRV/1-17-18



Legend

- Monitoring Well
- Borough Storm Sewer Manhole
- Storm Sewer Manhole
- Sanitary Sewer Manhole
- Mill Sewer Manhole
- Storm Sewer Network
- Mill Sewer Network
- Sanitary Sewer Network
- Abandoned Sanitary Sewer Line
- Borough Sanitary Sewer Line
- Borough Storm Sewer Line
- Tunnel Locations
- Parcel Boundary

Notes:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4 (2015)
2. Parcels Provided by Delaware County GIS.
3. Sewer, manhole network and tunnel locations were obtained from American Viscose Sectional Plot Plans dated Sepetember 8, 1952
4. Former sewer manhole junction box and tunnel locations are approximate.
5. Borough of Marcus Hook sewer and manhole locations were obtained from the "Final Subdivision Plan for Marcus Hook Business and Commerce Center Plan" dated August 7, 1987.

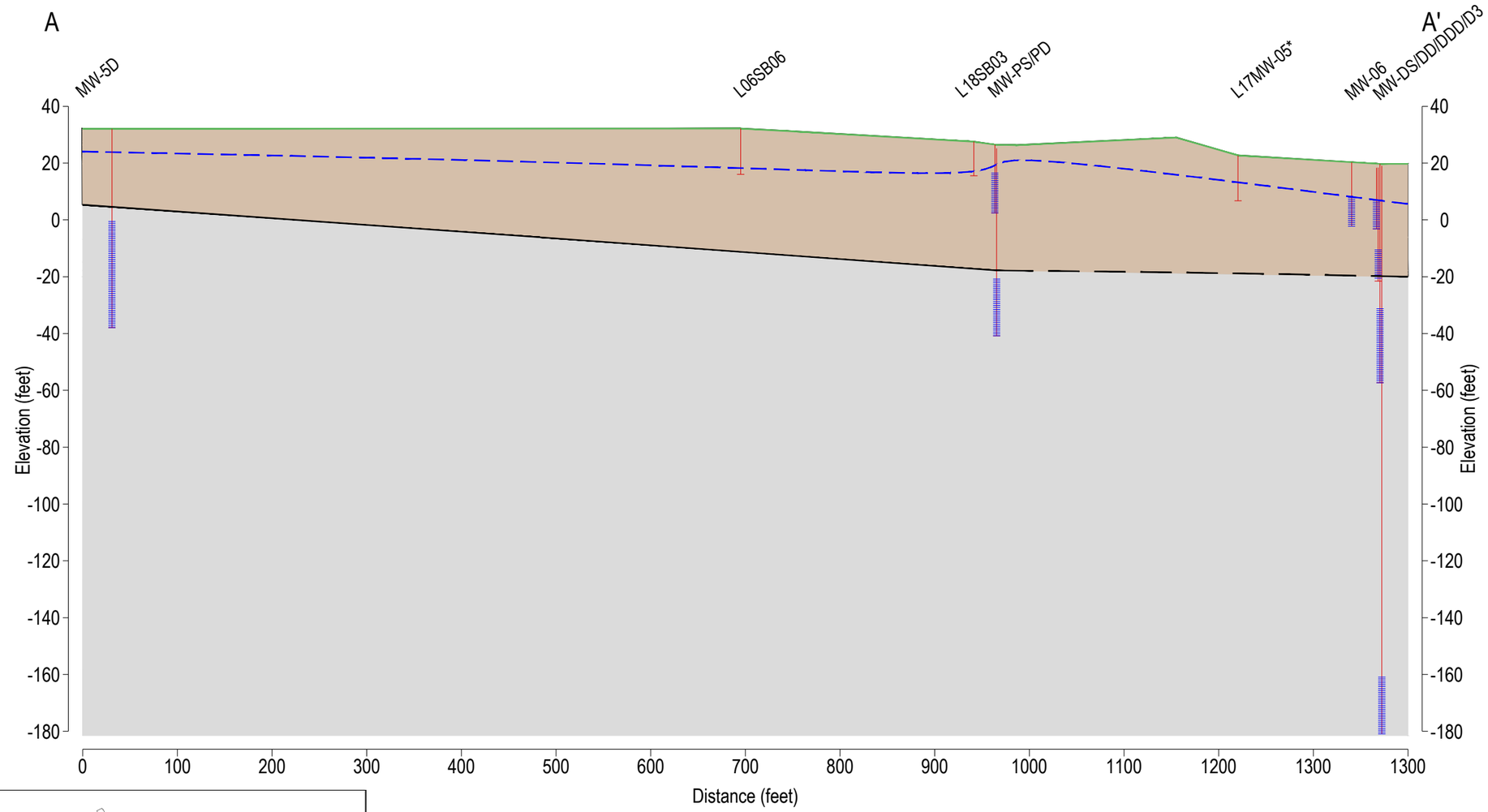
N

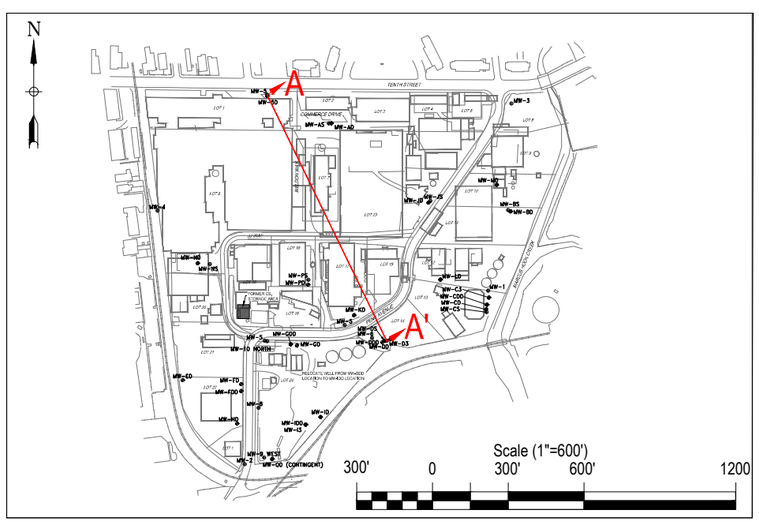
0 90 180 360
Feet

FIGURE 4
Sewer and Tunnel Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-MarcusHook_MXD\Conceptual Site Models\FINAL_FEB2018\REVISED_20180723\FIGURE4-SewerNetworkPlan_20180203.mxd - steven.vickery - 7/25/2018





Legend

Soil Boring
Riser
Well Screen

Cross-Section Location
Groundwater Elevation Contour
Overburden
Bedrock

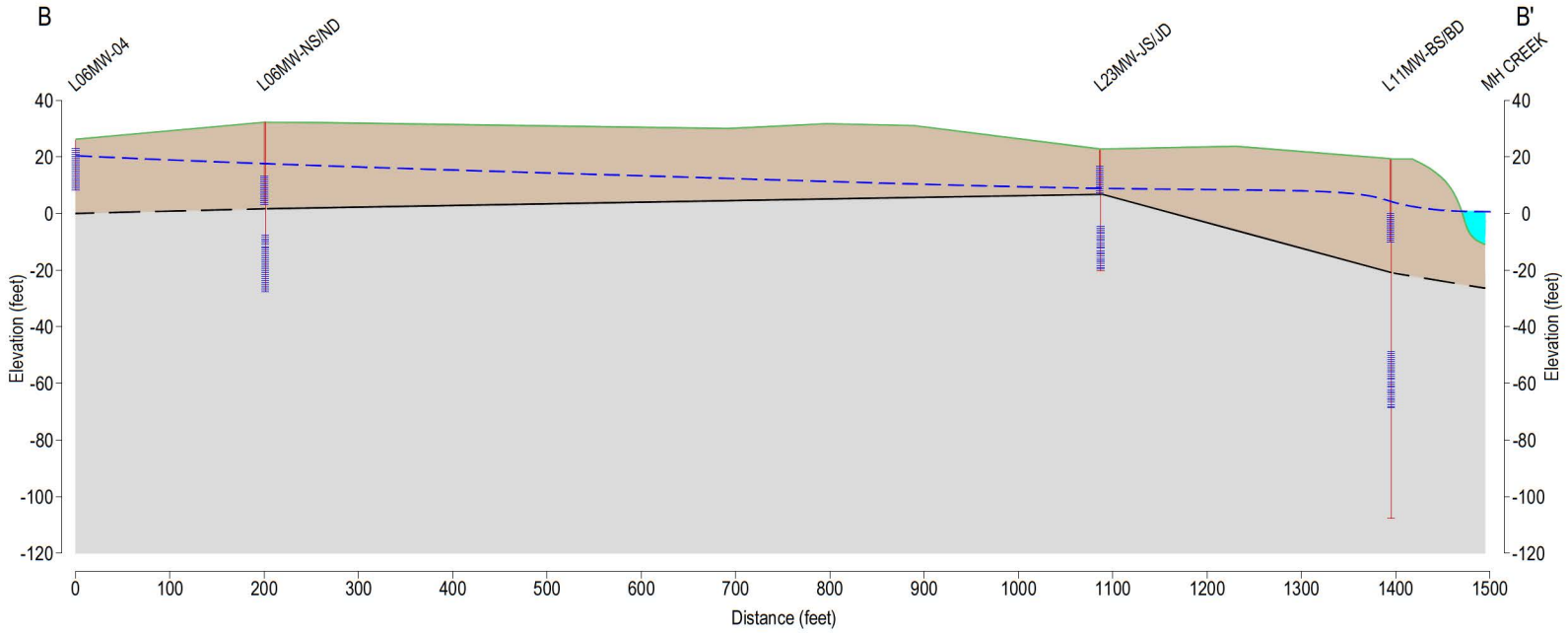
Notes

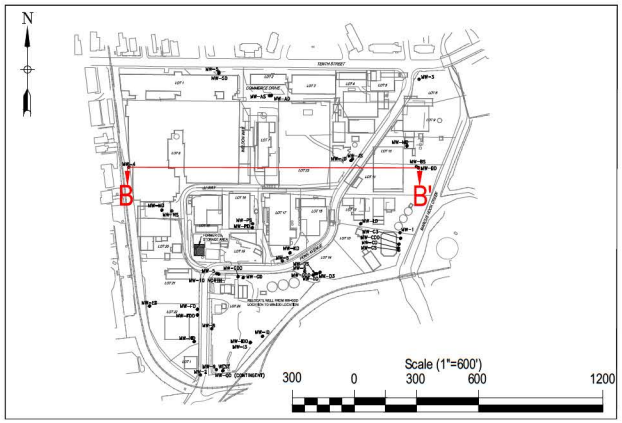
1. * = No screened information available..

FIGURE 5
SCHEMATIC GEOLOGIC CROSS SECTION
A - A'
EAST 10th STREET SITE
MARCUS HOOK, PENNSYLVANIA

ERM

\\usnhlsan01\Data\Team\DMM\CAD\Drawings\FMC Marcus Hook\0427248\A201.dwg (05/31/2018 - 11:44am Boston)





Legend

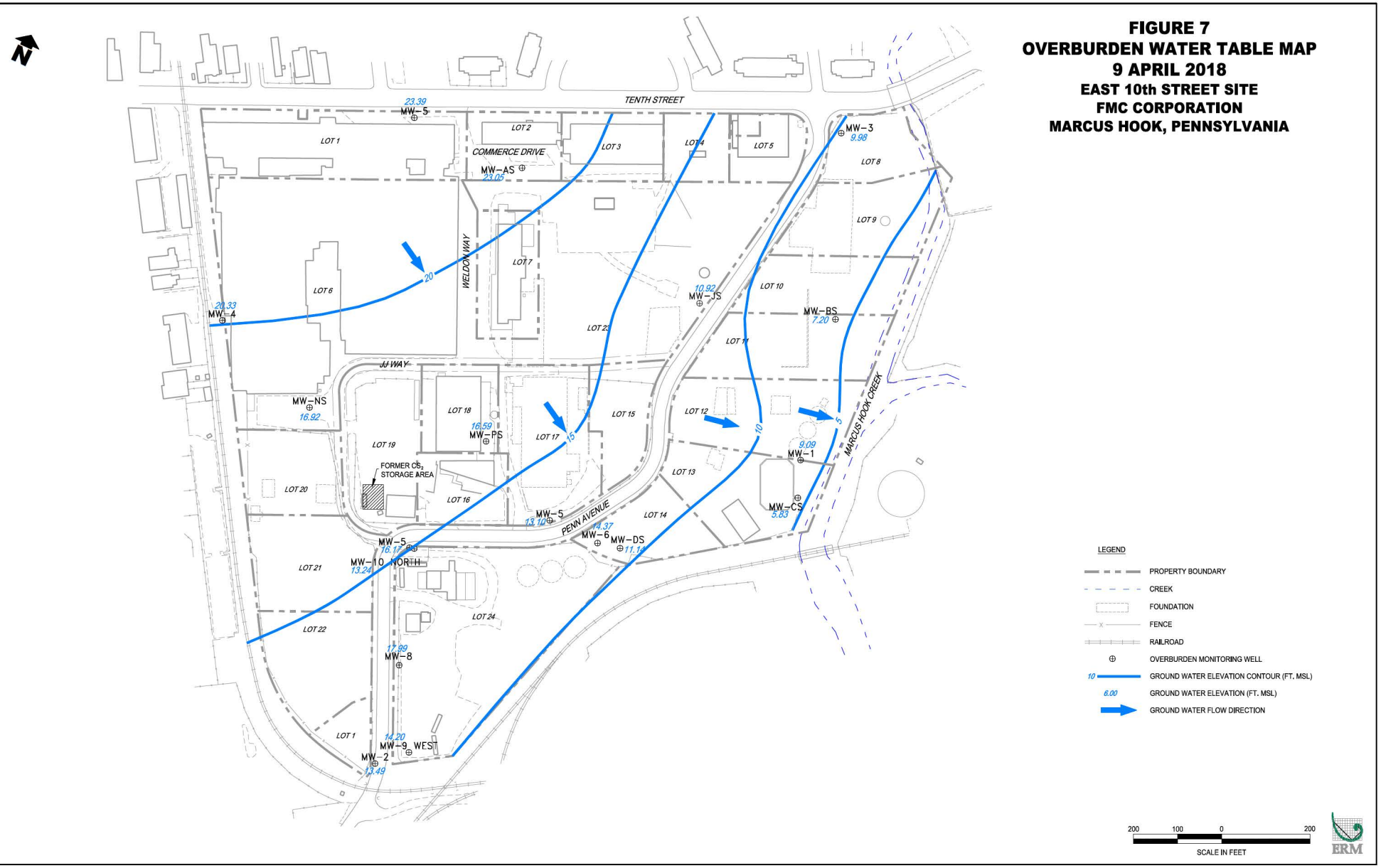
- Riser
- Well Screen
- Cross-Section Location
- Groundwater Elevation Contour
- Overburden
- Bedrock

FIGURE 6
SCHEMATIC GEOLOGIC CROSS SECTION
B - B'
EAST 10th STREET SITE
MARCUS HOOK, PENNSYLVANIA

ERM

\\usphlsan01\Data\Team\DMMW\CAD\Drawings\FMC_Marcus Hook\W27248\A201.dwg (05/31/2018 - 3:33pm Boston)

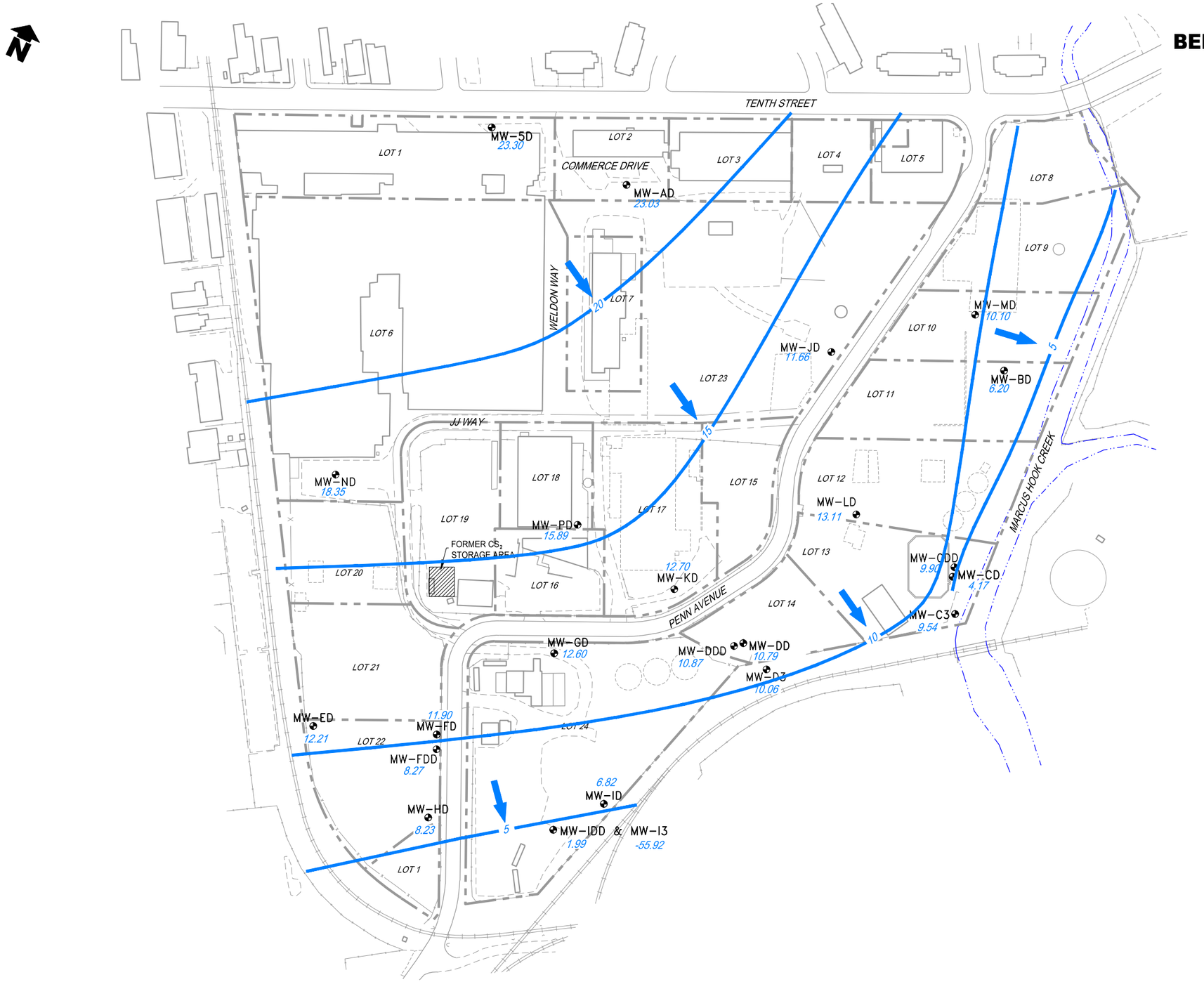
FIGURE 7
OVERBURDEN WATER TABLE MAP
9 APRIL 2018
EAST 10th STREET SITE
FMC CORPORATION
MARCUS HOOK, PENNSYLVANIA



\\usphlsn01\Data\Team\DMMV\CAD\Drawings\FMC_Marcus Hook\0461092\A205.dwg

PLS/4-2017

FIGURE 8
BEDROCK POTENTIOMETRIC SURFACE MAP
9 APRIL 2018
EAST 10th STREET SITE
FMC CORPORATION
MARCUS HOOK, PENNSYLVANIA



LEGEND

- PROPERTY BOUNDARY
- CREEK
- FOUNDATION
- FENCE
- RAILROAD
- BEDROCK MONITORING WELL
- 10 INTERPRETED GROUND WATER ELEVATION CONTOUR (FT. MSL)
- 6.00 GROUND WATER ELEVATION (FT. MSL)
- INTERPRETED GROUND WATER FLOW DIRECTION

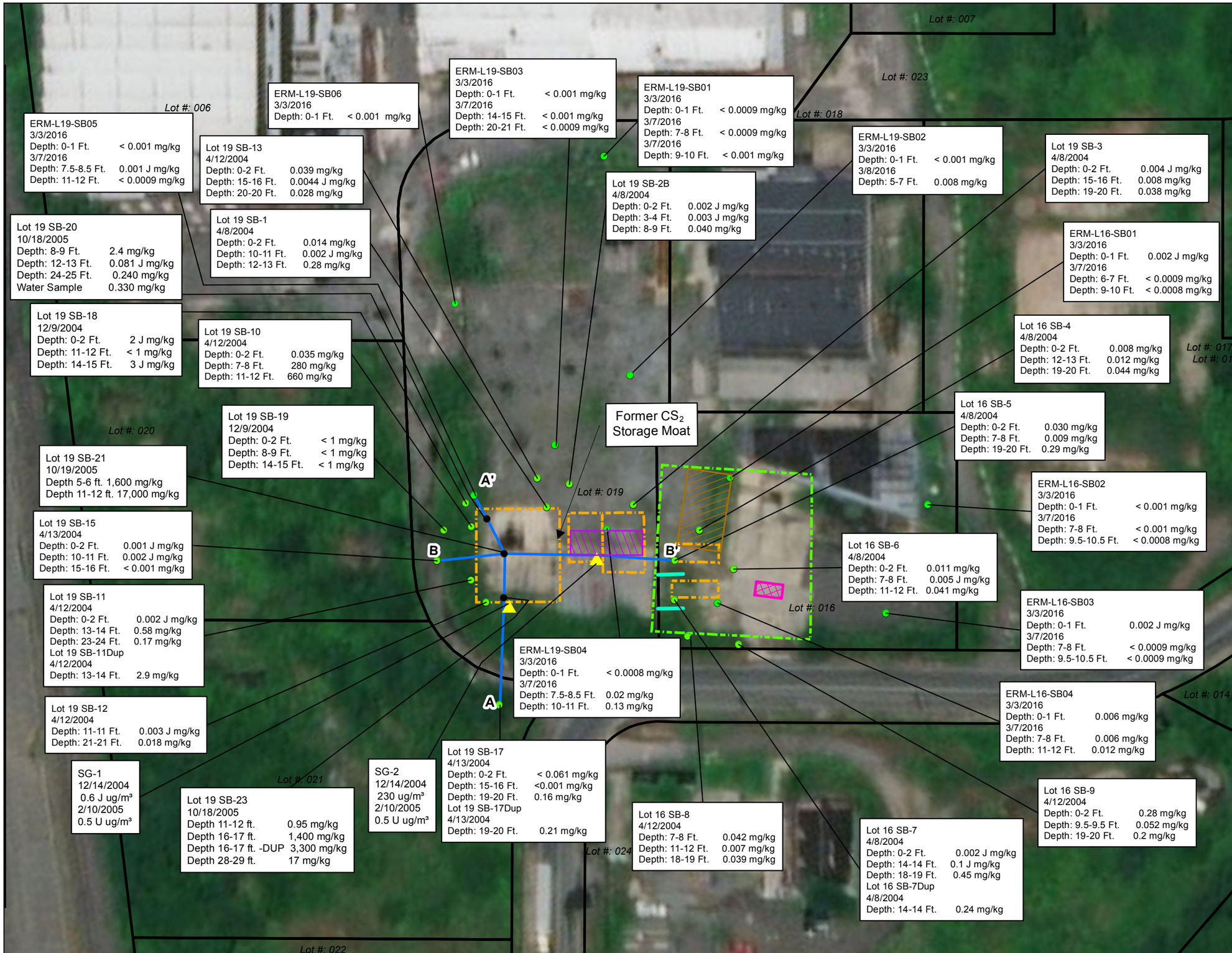
NOTE: MW-I3 HAS NOT RECOVERED FROM WELL DEVELOPMENT IN MAY 2016 AND WAS NOT USED FOR THIS BEDROCK POTENTIOMETRIC CONTOUR SURFACE MAP.

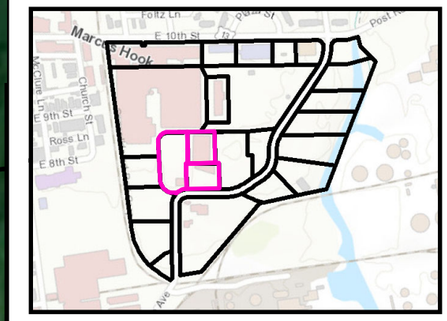
200 100 0 200
SCALE IN FEET

ERM

\\usphison01\Data\Team\DMMV\CAD\Drawings\FMC_Marcus Hook\0461092\A205.dwg

PLS/4-2017





Legend

- Boring Sample Locations Inside the Former CS_2 Moat
- Soil Boring Sample Locations Outside the Former CS_2 Moat
- Soil Gas Location
- Suspect Former Underground Utility Location per Geophysics
- Former CS_2 Storage Unit Based on American Viscose Drawing Dated 5/6/1957
- Anomaly (GPR Survey Report prepared by TPI dated March 25, 2016)
- Approximate area of geophysical survey on Lot 16
- Approximate limits of potential Soil Disposal per Mike Manerchia during site walk with John Torrence, ERM, on 16 Jan 2017
- Approximate limits of potential Soil Excavation per Mike Manerchia during site walk with John Torrence, ERM, on 16 Jan 2017
- Parcel Boundary

Notes:
1. Analytical results are for carbon disulfide only in mg/kg.
2. Act 2 cleanup standard for carbon disulfide for Non-Residential Direct Contact Surface Soil 0-2 ft. and Subsurface Soil 2-15 ft. is 10,000 mg/kg.
3. Act 2 Nonresidential Used Aquifer Soil-to-Groundwater MSC for carbon disulfide is 620 mg/kg.

0 32.5 65 130
Feet

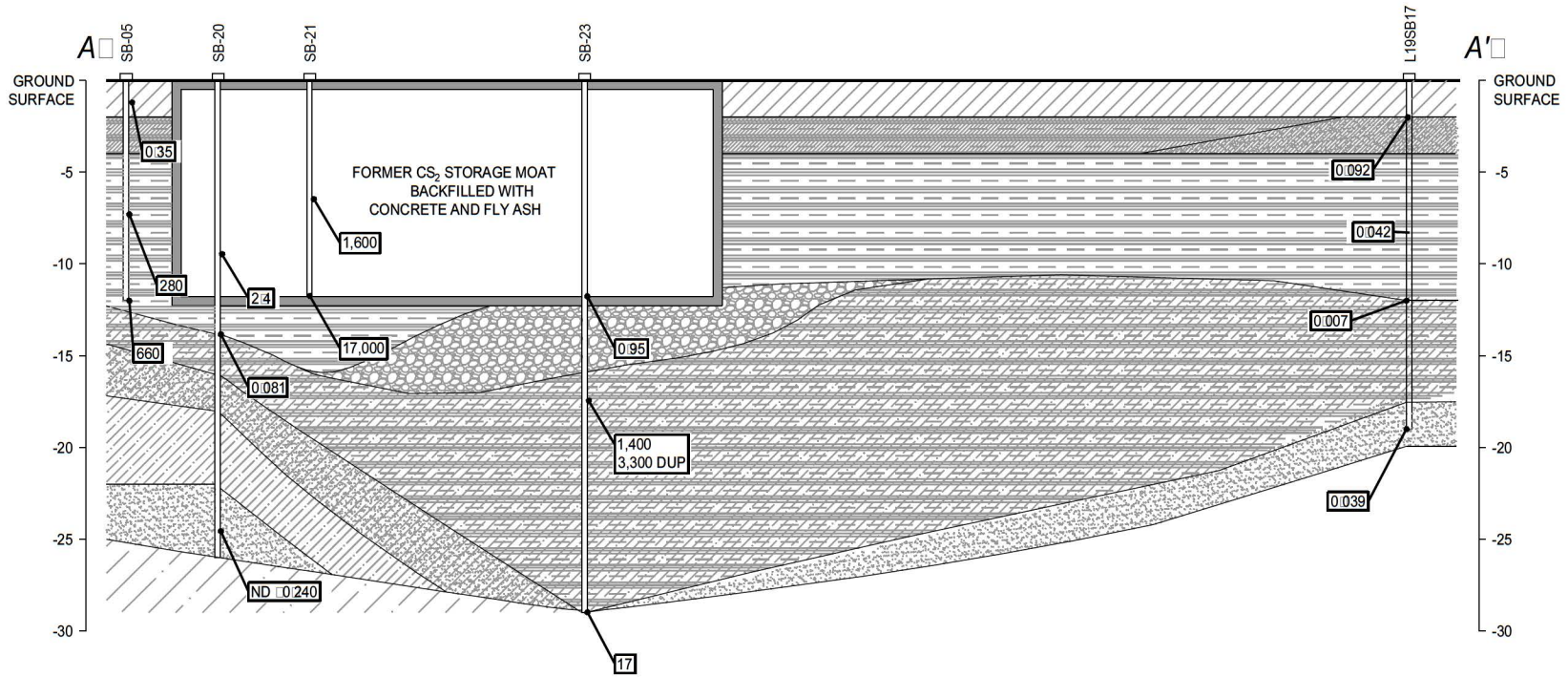
FIGURE 9

Lots 16 and 19 Former Carbon Disulfide Storage Moat Area Composite Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-MarcusHook_MXD\Lot Exceedence Figures\FINAL_FEB2018REVISED_20180726\FIGURE9-Lot19_CarbonDisulfideResults_CrossSection_20180209.mxd - steven.vickery - 8/20/2018

FIGURE 10
FORMER CS_2 STORAGE MOAT AREA SCHEMATIC
CROSS-SECTION A-A'
EAST 10th STREET HSCA SITE
MARCUS HOOK, PENNSYLVANIA



LEGEND

- BORING
- TOP SOIL
- CLAY
- SILT
- SILTY SAND
- SAND
- CONCRETE
- 0.001 J — CS_2 CONCENTRATION (mg/kg) IN SOLIDS WITHIN THE MOAT OR SOILS OUTSIDE THE MOAT
- COBBLES AND CONCRETE
- SILTY CLAY
- WEATHERED SCHIST
- CLAY FILL
- SANDY FILL

NOTES:
1. SB-10 IS PROJECTED 15' WEST
2. DUP = DUPLICATE
3. J: ESTIMATED VALUE ≥ THE METHOD DETECTION LIMIT
4. ND = NOT DETECTED

20 10 0 20

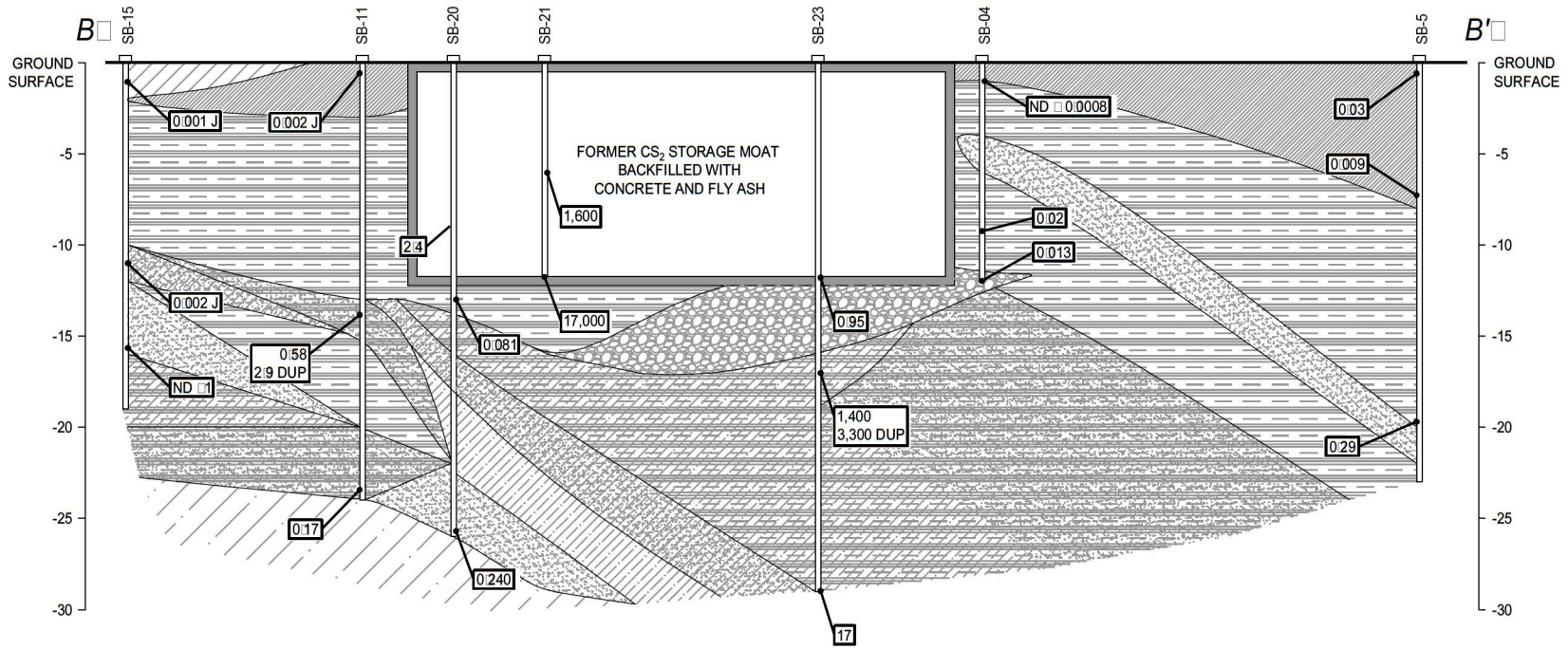
HORIZONTAL SCALE IN FEET
VERTICAL EXAGGERATION = 2X

ERM

Q:\Team\DMMV\CAD\Drawings\FMC_Marcus Hook\0427248\E203.dwg

PLS/03-2017

FIGURE 11
FORMER CS_2 STORAGE MOAT AREA SCHEMATIC
CROSS-SECTION B - B'
EAST 10th STREET HSCA SITE
MARCUS HOOK, PENNSYLVANIA



LEGEND

BORING	0.001 J — CS_2 CONCENTRATION (mg/kg) IN SOLIDS WITHIN THE MOAT OR SOILS OUTSIDE THE MOAT
TOP SOIL	FILL
CLAY	COBBLES AND CONCRETE
SILT	SANDY CLAY
SILTY SAND	SILTY CLAY
SAND	WEATHERED SCHIST
CONCRETE	

NOTES:
1. SB-11 IS PROJECTED 15' SOUTH
2. SB-20 IS PROJECTED 25' NORTH
3. SB-23 IS PROJECTED 15' SOUTH
4. SB-4 IS PROJECTED 15' NORTH
5. DUP = DUPLICATE
6. J: ESTIMATED VALUE ≥ THE METHOD DETECTION LIMIT
7. ND = NOT DETECTED
8. HORIZONTAL DISTANCE BETWEEN SB-21 AND SB-23 IS NOT TO SCALE

20 10 0 20

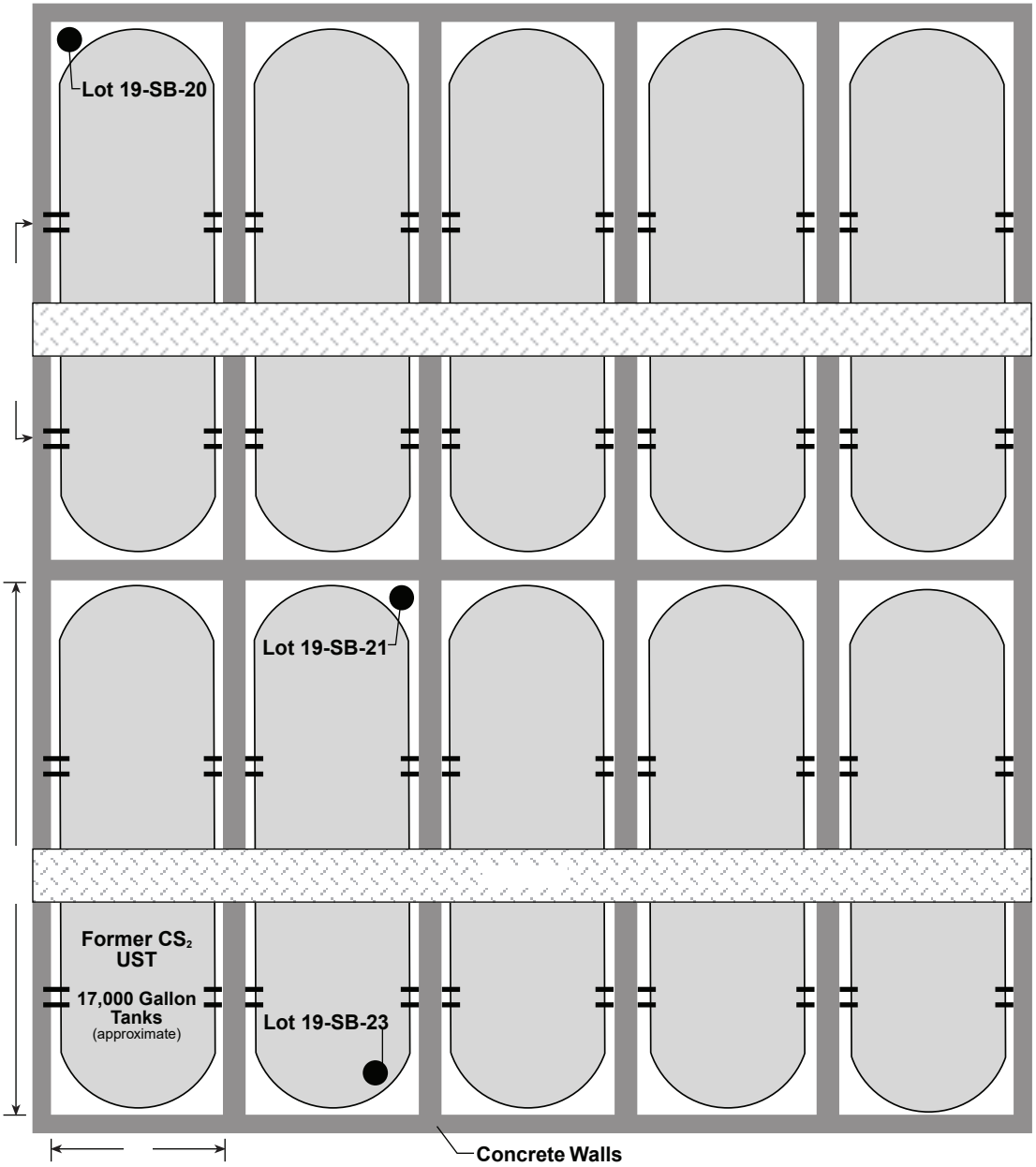
HORIZONTAL SCALE IN FEET
VERTICAL EXAGGERATION = 2X

ERM

Q:\Team\DMMV\CAD\Drawings\FMC_Marcus Hook\0427248\E203.dwg

PLS/03-2017

FIGURE 12
Former CS_2 Storage Moat
East 10th Street Site
Marcus Hook, Pennsylvania



LEGEND

● Approximate Boring Location

N

5 0 10 20

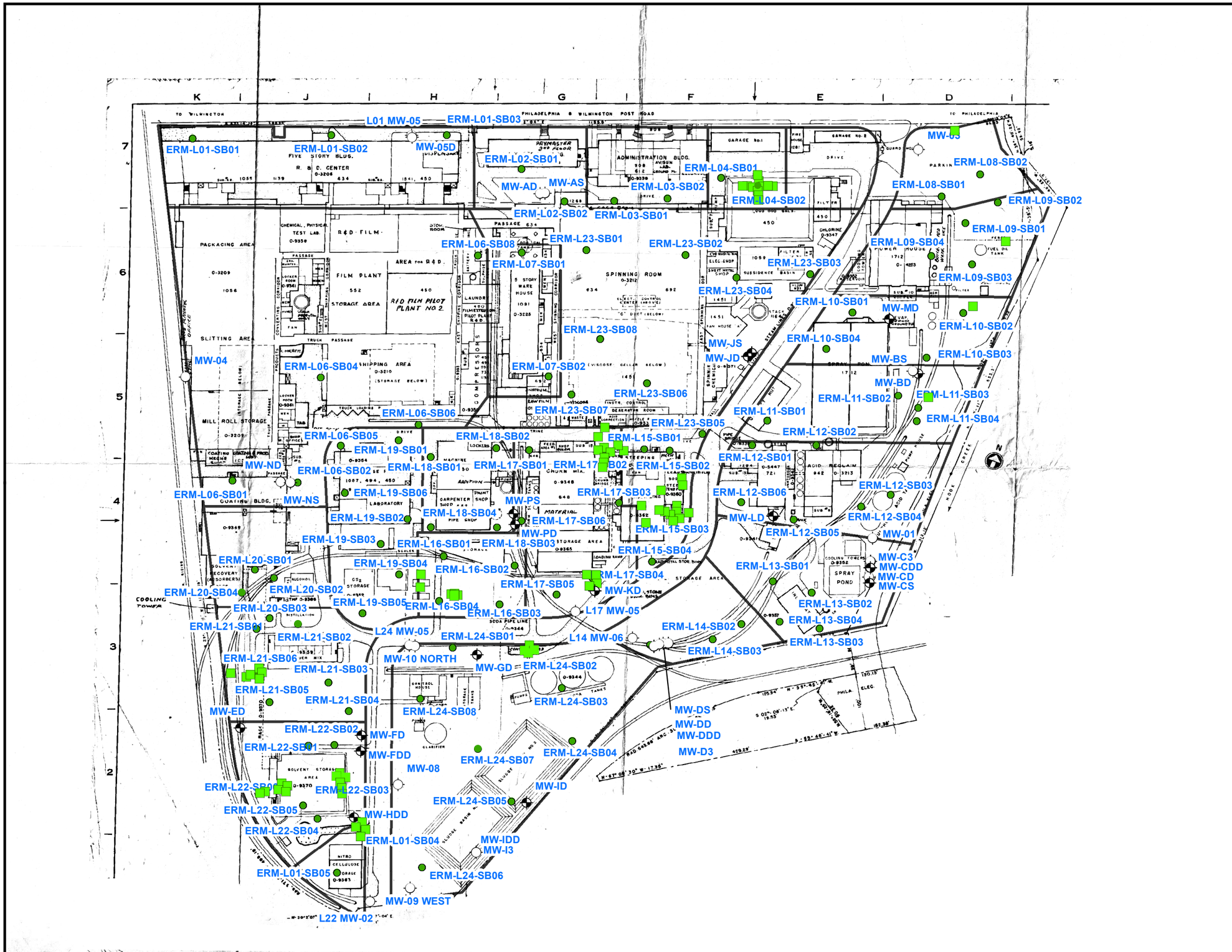
Scale in Feet (Approx.)

Note: Distances are approximate.

ERM

Source: FMC Corporation Sketch Plan (undated).

FMC 0042425 EK/RD 1-31-06 Rev. 8-07



Legend

- Monitoring Well
- Step-Out Soil Sample Location
- Soil Boring Location
- Parcel Boundary

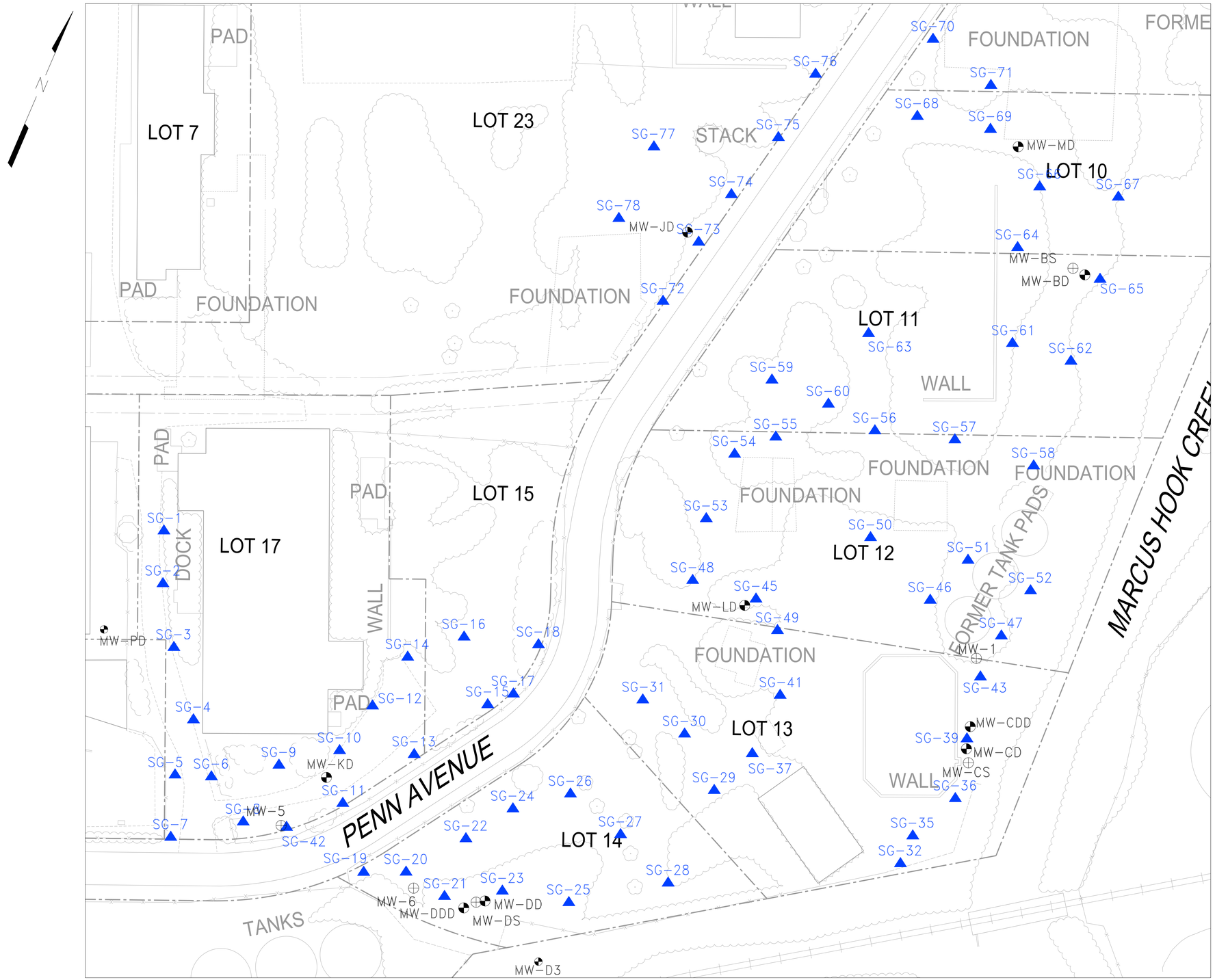
Notes:
1. Step-Out Soil Sample Id Numbers are shown on Figures 16-22.

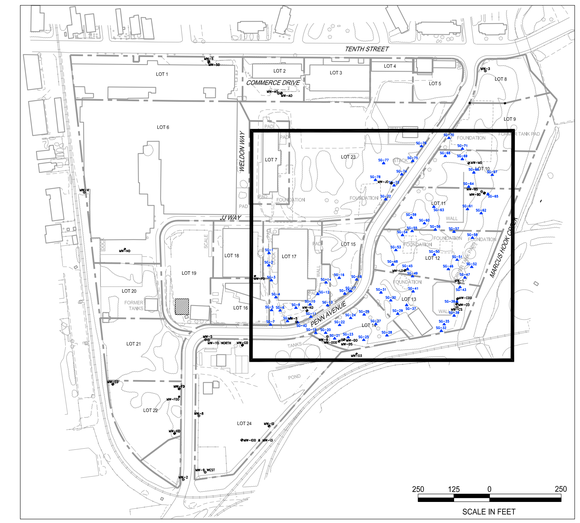
0 90 180 360
Feet

FIGURE 13
2015-2017 Soil Investigation
Soil Boring Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-Marcushook_IXD\Lot Exceedence Figures\FINAL_FEB2018\REVISED_20180723\FIGURE13-2015-2016SoilInvestigation_20180613.mxd - steven.vickery - 8/20/2018





LEGEND

- PROPERTY LINE
- RAILROAD
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- FORMER CS_2 STORAGE AREA
- GORE-SORBER® SOIL GAS SAMPLE POINT LOCATION

40 20 0 40
SCALE IN FEET

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

EAST 10th STREET SITE
FMC CORPORATION
MARCUS HOOK **PENNSYLVANIA**

Environmental Resources Management
Exton, Pennsylvania 19341 (610) 524-3500
ERM

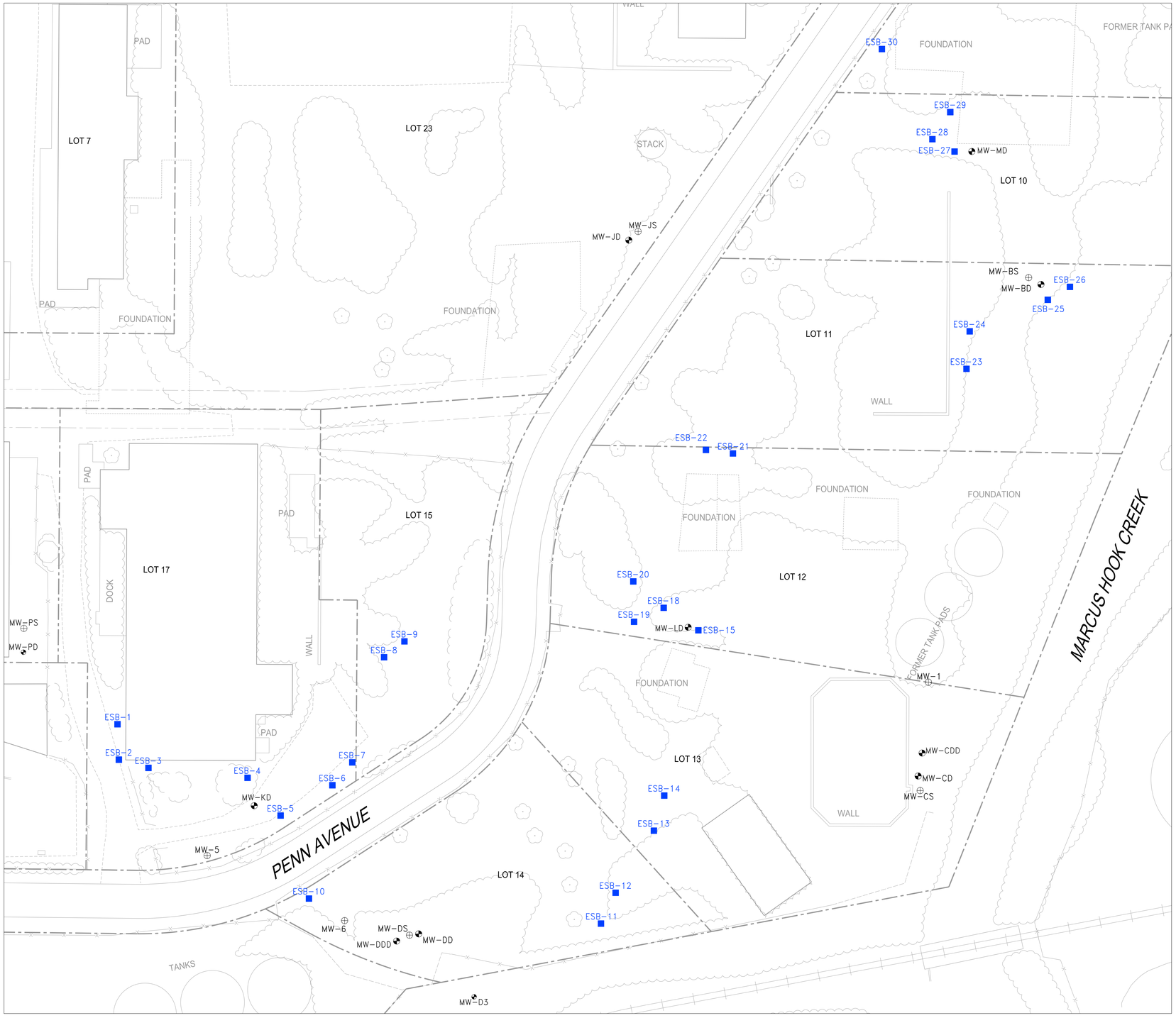
CHECKED	DATE
DESIGN ENGINEER	
PROJECT ENGINEER	
PROJECT MANAGER	
APPROVED	
APPROVED	

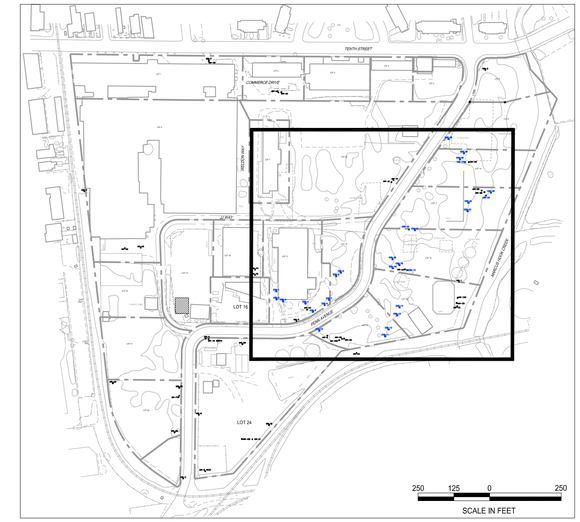
FIGURE 14
2010 GORE-SORBER® SOIL GAS SAMPLE POINT LOCATIONS

DRAWN	DATE	CLIENT APPROVAL
MLB	9-7-10	
SCALE	W.O. No.	ISSUED FOR DATE
AS SHOWN	0118947	

DRAWING NO.
REV. NO.
SHEET OF

\\uspthson01\Data1\com\DMWV\CAD\Drawings\FMC_Marcus Hook\0461092\A301.dwg





LEGEND

- PROPERTY LINE
- FENCE
- RAILROAD
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- FORMER CS_2 STORAGE AREA
- ERM SOIL BORING - NOVEMBER 2010

40 20 0 40
SCALE IN FEET

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

EAST 10th STREET SITE
FMC CORPORATION
MARCUS HOOK **PENNSYLVANIA**

Environmental Resources Management
Exton, Pennsylvania 19341 (610) 524-3500
ERM

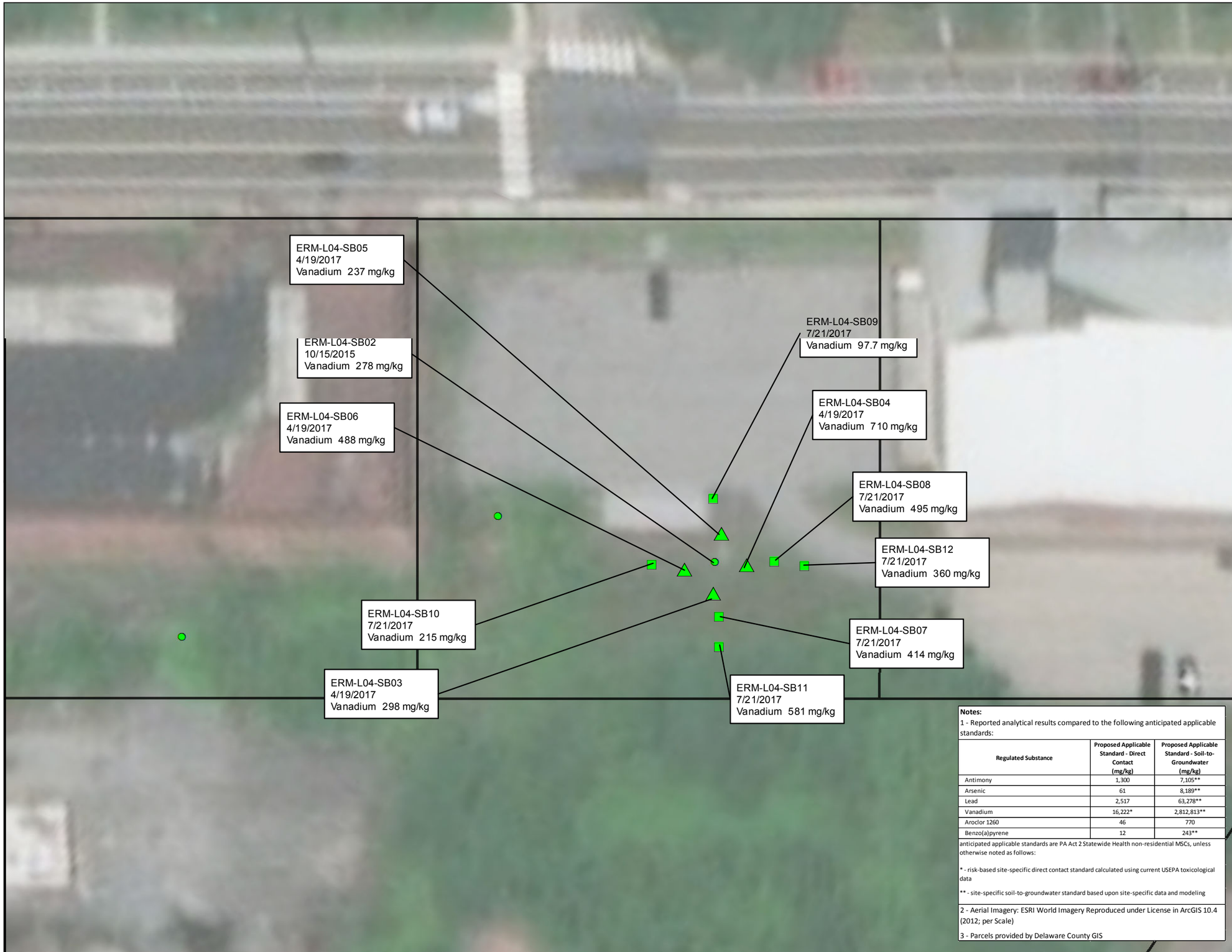
CHECKED	DATE
DESIGN ENGINEER	
PROJECT ENGINEER	
PROJECT MANAGER	
APPROVED	
APPROVED	

FIGURE 15
SOIL SAMPLING LOCATIONS
NOVEMBER 2010

DRAWN	DATE	CLIENT APPROVAL
MLB	11-1-10	
SCALE	W.O. No.	ISSUED FOR DATE
AS SHOWN	0118947	

DRAWING NO.
REV. NO.
SHEET OF

\\ussthson01\Data\Team\DMWV\C40\Drawings\FMC_Marcus Hook\042748\A307.dwg



Notes:

1 - Reported analytical results compared to the following anticipated applicable standards:

Regulated Substance	Proposed Applicable Standard - Direct Contact (mg/kg)	Proposed Applicable Standard - Soil-to-Groundwater (mg/kg)
Antimony	1,300	7,105**
Arsenic	61	8,189**
Lead	2,517	63,278**
Vanadium	16,222*	2,812,813**
Aroclor 1260	46	770
Benzo(a)pyrene	12	243**

anticipated applicable standards are PA Act 2 Statewide Health non-residential MSCs, unless otherwise noted as follows:

* - risk-based site-specific direct contact standard calculated using current USEPA toxicological data

** - site-specific soil-to-groundwater standard based upon site-specific data and modeling

2 - Aerial Imagery: ESRI World Imagery Reproduced under License in ArcGIS 10.4 (2012; per Scale)

3 - Parcels provided by Delaware County GIS

Legend

Soil Results (0-2 ft)

- Soil Sample Location (2015-2016) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Soil Sample Location (2015-2016) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Monitor Well
- Parcel Boundary

N

0 15 30 60
Feet

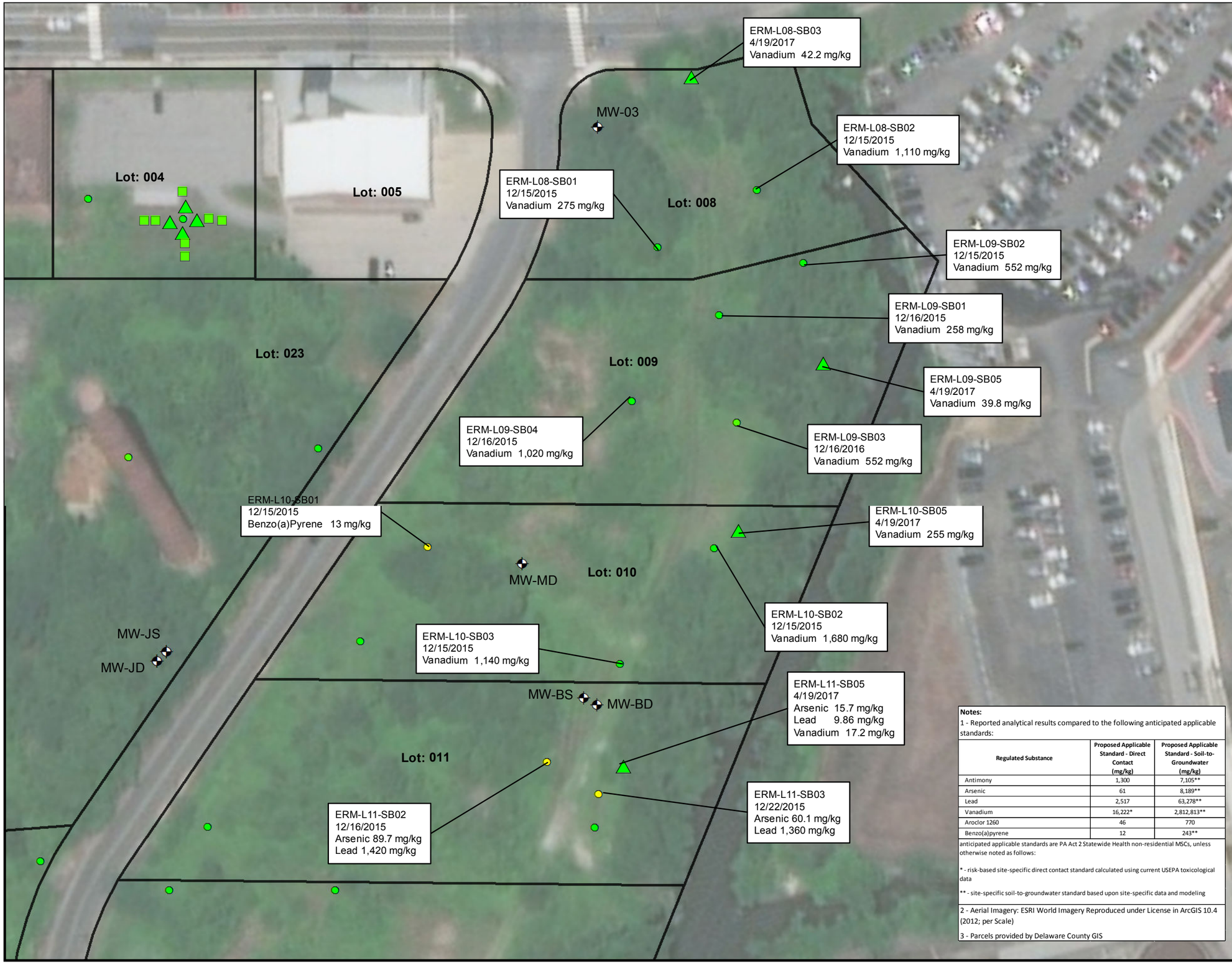
1 inch = 30 feet

FIGURE 16

LOT 4- Sample Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-Marcus Hook_MXD\Lot Exceedence Figures\FINAL_FEB2018REVISED_20180723\FIGURE 16-Lot4-SampleLocations_20170926.mxd -- steven.vickery - 7/25/2018



Notes:

1 - Reported analytical results compared to the following anticipated applicable standards:

Regulated Substance	Proposed Applicable Standard - Direct Contact (mg/kg)	Proposed Applicable Standard - Soil-to-Groundwater (mg/kg)
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Arsenic	61	8,189**
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Vanadium	16,222*	2,812,813**
Aroclor 1260	46	770
Benzo(a)pyrene	12	243**

anticipated applicable standards are PA Act 2 Statewide Health non-residential MSCs, unless otherwise noted as follows:

* - risk-based site-specific direct contact standard calculated using current USEPA toxicological data

** - site-specific soil-to-groundwater standard based upon site-specific data and modeling

2 - Aerial Imagery: ESRI World Imagery Reproduced under License in ArcGIS 10.4 (2012; per Scale)

3 - Parcels provided by Delaware County GIS

Legend

Soil Results (0-2 ft)

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- Soil Sample Location (2015-2016) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Monitor Well
- Parcel Boundary

N

0 35 70 140
Feet

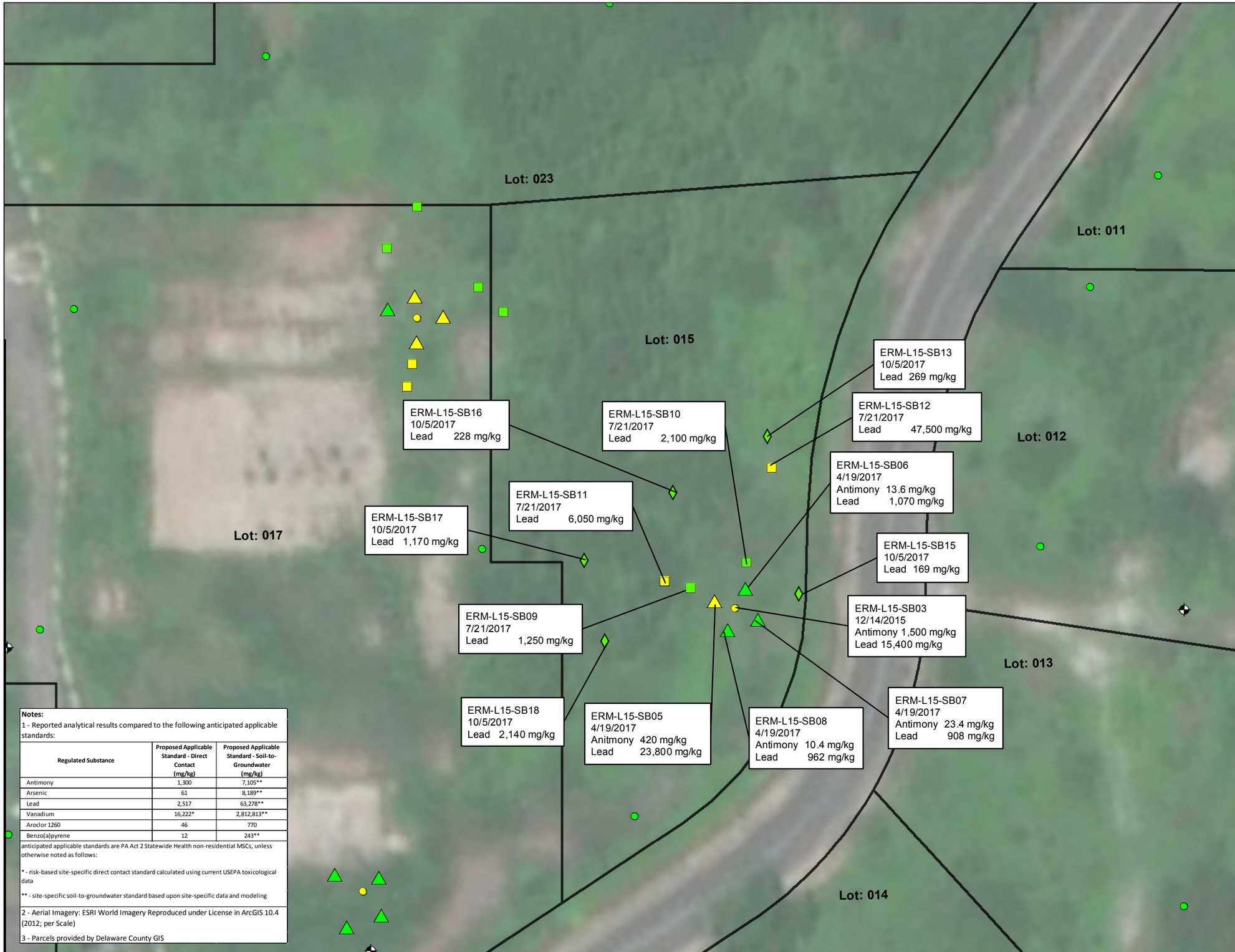
1 inch = 70 feet

FIGURE 17

LOT 8, 9, 10, 11- Sample Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-MarcusHook_MXD\Lot Exceedence Figures\FINAL_FEB2018REVISED_20180723\FIGURE17-Lot10-SampleLocations_20170926.mxd - steven.vickery - 7/25/2018



Notes:

1 - Reported analytical results compared to the following anticipated applicable standards:

Regulated Substance	Proposed Applicable Standard - Direct Contact (mg/kg)	Proposed Applicable Standard - Soil-to-Groundwater (mg/kg)
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Arsenic	61	8,189**
Lead	2,517	63,278**
Vanadium	16,222*	2,812,813**
Aroclor 1260	46	770
Benzo(a)pyrene	12	243**

anticipated applicable standards are PA Act 2 Statewide Health non-residential MSCs, unless otherwise noted as follows:

* - risk-based site-specific direct contact standard calculated using current USEPA toxicological data

** - site-specific soil-to-groundwater standard based upon site-specific data and modeling

2 - Aerial Imagery: ESRI World Imagery Reproduced under License in ArcGIS 10.4 (2012; per Scale)

3 - Parcels provided by Delaware County GIS

Legend

Soil Results (0-2 ft)

- Soil Sample Location (2015-2016) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Soil Sample Location (2015-2016) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (October 2017)-Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (October 2017)-Exceed Proposed Applicable Standard (refer to note 1)
- Monitor Well
- Parcel Boundary

0 20 40 80
Feet

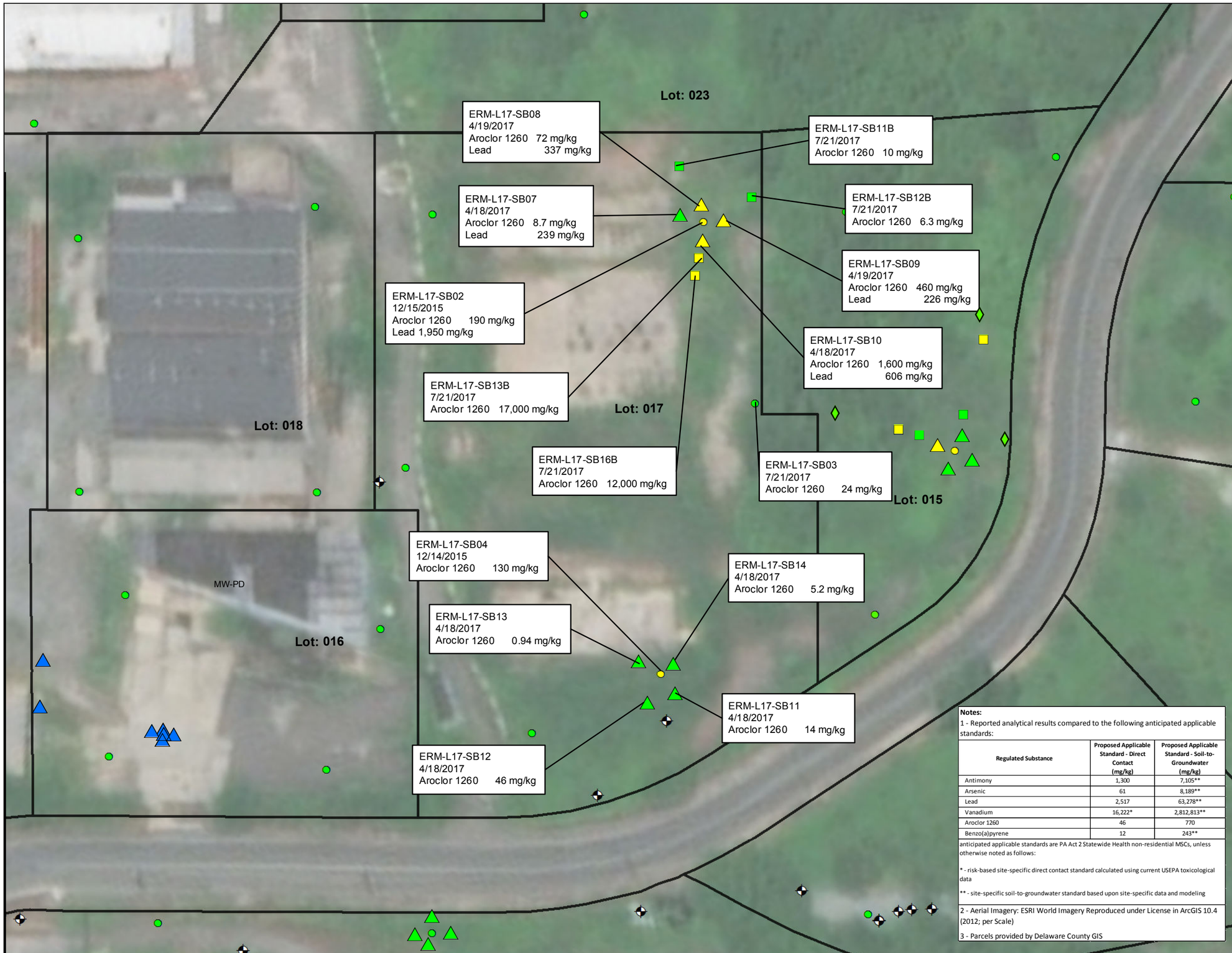
1 inch = 40 feet

FIGURE 18

LOT 15- Sample Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\PNC-MarcusHook_MX\DLot Exceedance Figures\FINAL_FEB2018\REVISED_20180723\FIGURE18-Lot15-SampleLocations_20171019.mxd - steven.vickery - 7/25/2018



Notes:

1 - Reported analytical results compared to the following anticipated applicable standards:

Regulated Substance	Proposed Applicable Standard - Direct Contact (mg/kg)	Proposed Applicable Standard - Soil-to-Groundwater (mg/kg)
Antimony	1,300	7,105**
Arsenic	61	8,189**
Lead	2,517	63,278**
Vanadium	16,222*	2,812,813**
Aroclor 1260	46	770
Benzo(a)pyrene	12	243**

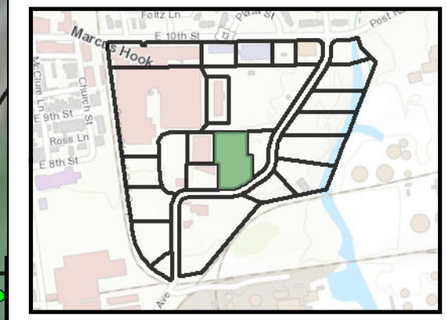
anticipated applicable standards are PA Act 2 Statewide Health non-residential MSCs, unless otherwise noted as follows:

* - risk-based site-specific direct contact standard calculated using current USEPA toxicological data

** - site-specific soil-to-groundwater standard based upon site-specific data and modeling

2 - Aerial Imagery: ESRI World Imagery Reproduced under License in ArcGIS 10.4 (2012; per Scale)

3 - Parcels provided by Delaware County GIS



Legend

Soil Results (0-2 ft)

- Soil Sample Location (2015-2016) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Soil Sample Location (2015-2016) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Air Knife & Soft Dig Location
- Step-Out Soil Sample Location (April 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (October 2017)-Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Monitor Well
- Parcel Boundary

0 27.5 55 110
Feet

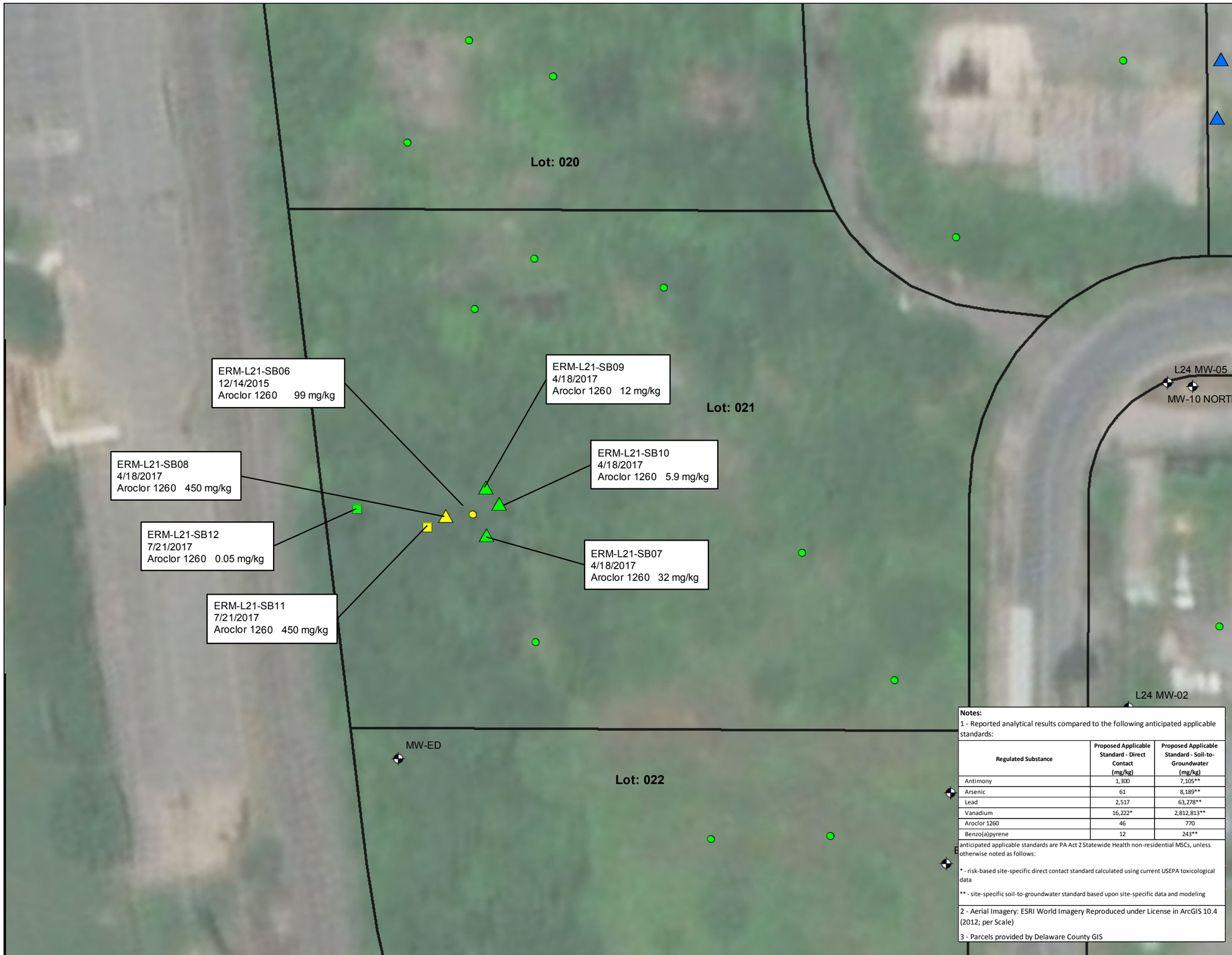
1 inch = 50 feet

FIGURE 19

LOT 17- Sample Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\PNC-MarcusHook_MXD\Lot Exceedance Figures\FINAL_FEB2018REVISED_20180723\FIGURE19-Lot17-SampleLocations_20170926.mxd - steven.vickery - 7/25/2018



Notes:

1 - Reported analytical results compared to the following anticipated applicable standards:

Regulated Substance	Proposed Applicable Standard - Direct Contact (mg/kg)	Proposed Applicable Standard - Soil-to-Groundwater (mg/kg)
Antimony	1,300	7,105**
Arsenic	61	8,189**
Lead	2,517	63,278**
Vanadium	16,222*	2,812,813**
Aroclor 1260	46	770
Benzo(a)pyrene	12	243**

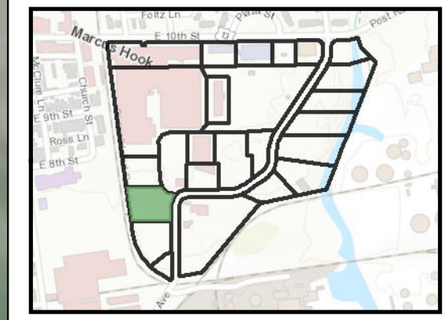
anticipated applicable standards are PA Act 2 Statewide Health non-residential MSCs, unless otherwise noted as follows:

* - risk-based site-specific direct contact standard calculated using current USEPA toxicological data

** - site-specific soil-to-groundwater standard based upon site-specific data and modeling

2 - Aerial Imagery: ESRI World Imagery Reproduced under License in ArcGIS 10.4 (2012; per Scale)

3 - Parcels provided by Delaware County GIS



Legend

Soil Results (0-2 ft)

- Soil Sample Location (2015-2016) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Soil Sample Location (2015-2016) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017)-Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Air Knife & Soft Dig Location
- Monitor Well
- Parcel Boundary

0 20 40 80
Feet

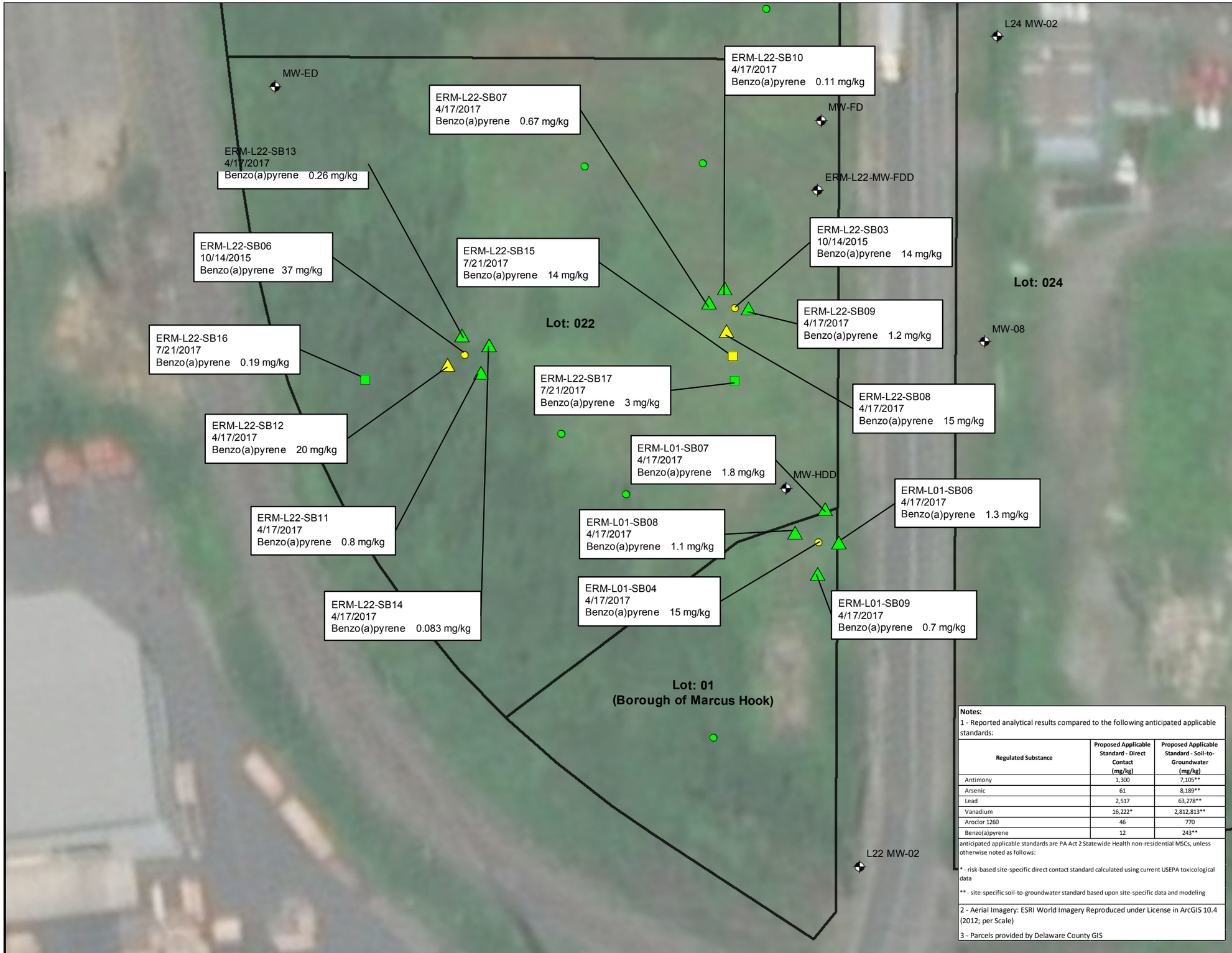
1 inch = 40 feet

FIGURE 20

LOT 21- Sample Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-MarcusHook_MXD\Lot Exceedance Figures\FINAL_FEB2018\REVISED_20180723\FIGURE20-Lot21-SampleLocations_20170926.mxd - steven.vickery - 7/25/2018



Notes:

1 - Reported analytical results compared to the following anticipated applicable standards:

Regulated Substance	Proposed Applicable Standard - Direct Contact (mg/kg)	Proposed Applicable Standard - Soil-to-Groundwater (mg/kg)
Antimony	1,300	7,105**
Arsenic	61	8,189**
Lead	2,517	63,278**
Vanadium	16,222*	2,812,813**
Aroclor 1260	46	770
Benzo(a)pyrene	12	243**

anticipated applicable standards are PA Act 2 Statewide Health non-residential MSCs, unless otherwise noted as follows:

* - risk-based site-specific direct contact standard calculated using current USEPA toxicological data

** - site-specific soil-to-groundwater standard based upon site-specific data and modeling

2 - Aerial Imagery: ESRI World Imagery Reproduced under License in ArcGIS 10.4 (2012; per Scale)

3 - Parcels provided by Delaware County GIS

Legend

Soil Results (0-2 ft)

- Soil Sample Location (2015-2016) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Soil Sample Location (2015-2016) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Monitor Well
- Parcel Boundary

N

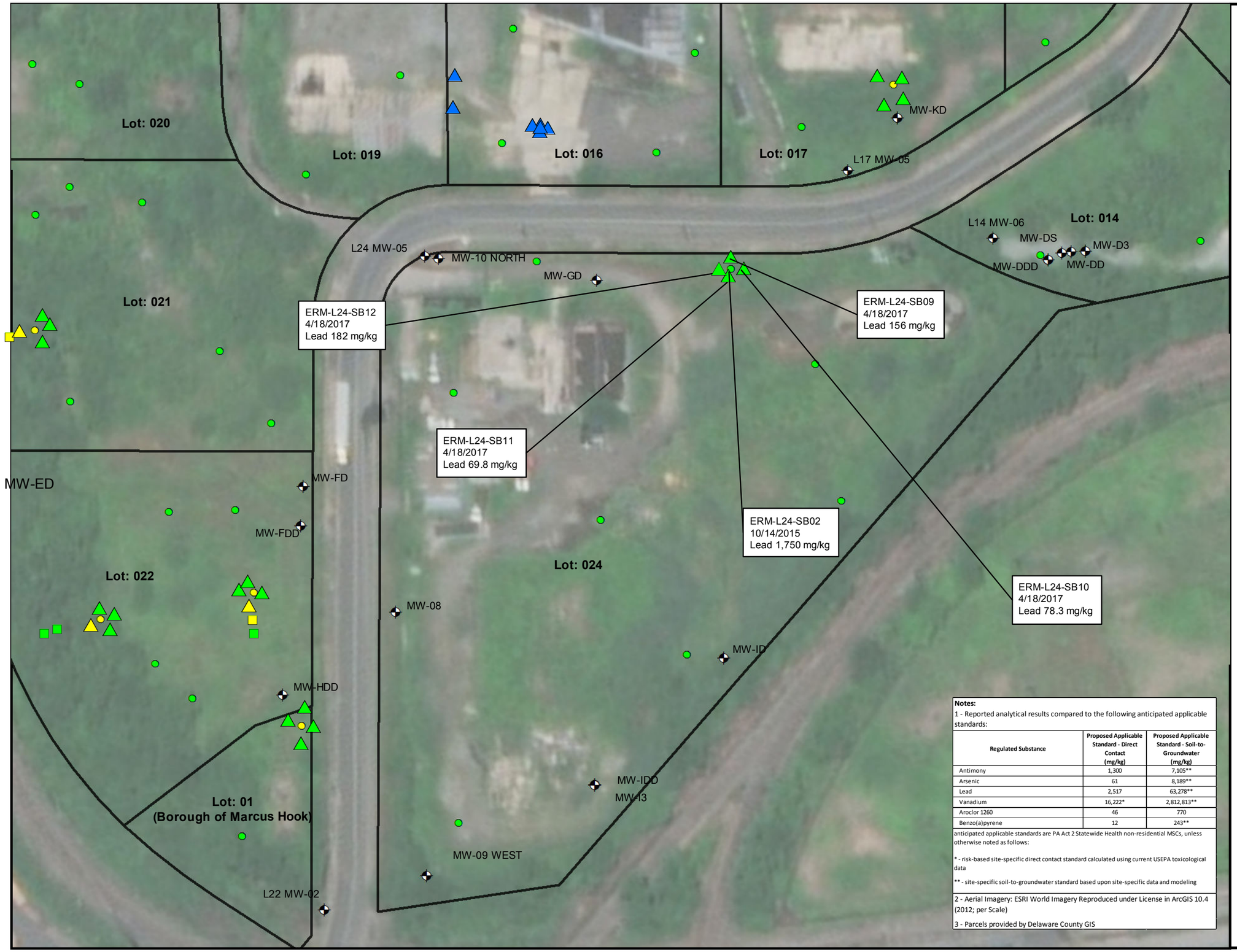
0 20 40 80
Feet

FIGURE 21

LOT 22- Sample Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-MarcusHook_MXD\Lot Exceedance Figures\FINAL_FEB2018\REVISED_20180723\FIGURE21-Lot22-SampleLocations_20170926.mxd - steven.vickery - 7/25/2018



Notes:

1 - Reported analytical results compared to the following anticipated applicable standards:

Regulated Substance	Proposed Applicable Standard - Direct Contact (mg/kg)	Proposed Applicable Standard - Soil-to-Groundwater (mg/kg)
Antimony	1,300	7,105**
Arsenic	61	8,189**
Lead	2,517	63,278**
Vanadium	16,222*	2,812,813**
Aroclor 1260	46	770
Benzo(a)pyrene	12	243**

anticipated applicable standards are PA Act 2 Statewide Health non-residential MSCs, unless otherwise noted as follows:

* - risk-based site-specific direct contact standard calculated using current USEPA toxicological data

** - site-specific soil-to-groundwater standard based upon site-specific data and modeling

2 - Aerial Imagery: ESRI World Imagery Reproduced under License in ArcGIS 10.4 (2012; per Scale)

3 - Parcels provided by Delaware County GIS

Legend

Soil Results (0-2 ft)

- Soil Sample Location (2015-2016) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Soil Sample Location (2015-2016) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017)-Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (July 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Exceed Proposed Applicable Standard (refer to note 1)
- Step-Out Soil Sample Location (April 2017) - Did Not Exceed Proposed Applicable Standard (refer to note 1)
- Air Knife & Soft Dig Location
- Monitor Well
- Parcel Boundary

N

0 35 70 140
Feet

1 inch = 70 feet

FIGURE 22

LOT 24- Sample Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\PNC-MarcusHook_MXD\Lot Exceedance Figures\FINAL_FEB2018REVISED_20180723\FIGURE22-Lot24-SampleLocations_20170926.mxd - steven.vickery - 7/26/2018

Legend

- Overburden Monitoring Well
- Bedrock Monitoring Well
- Parcel Boundary

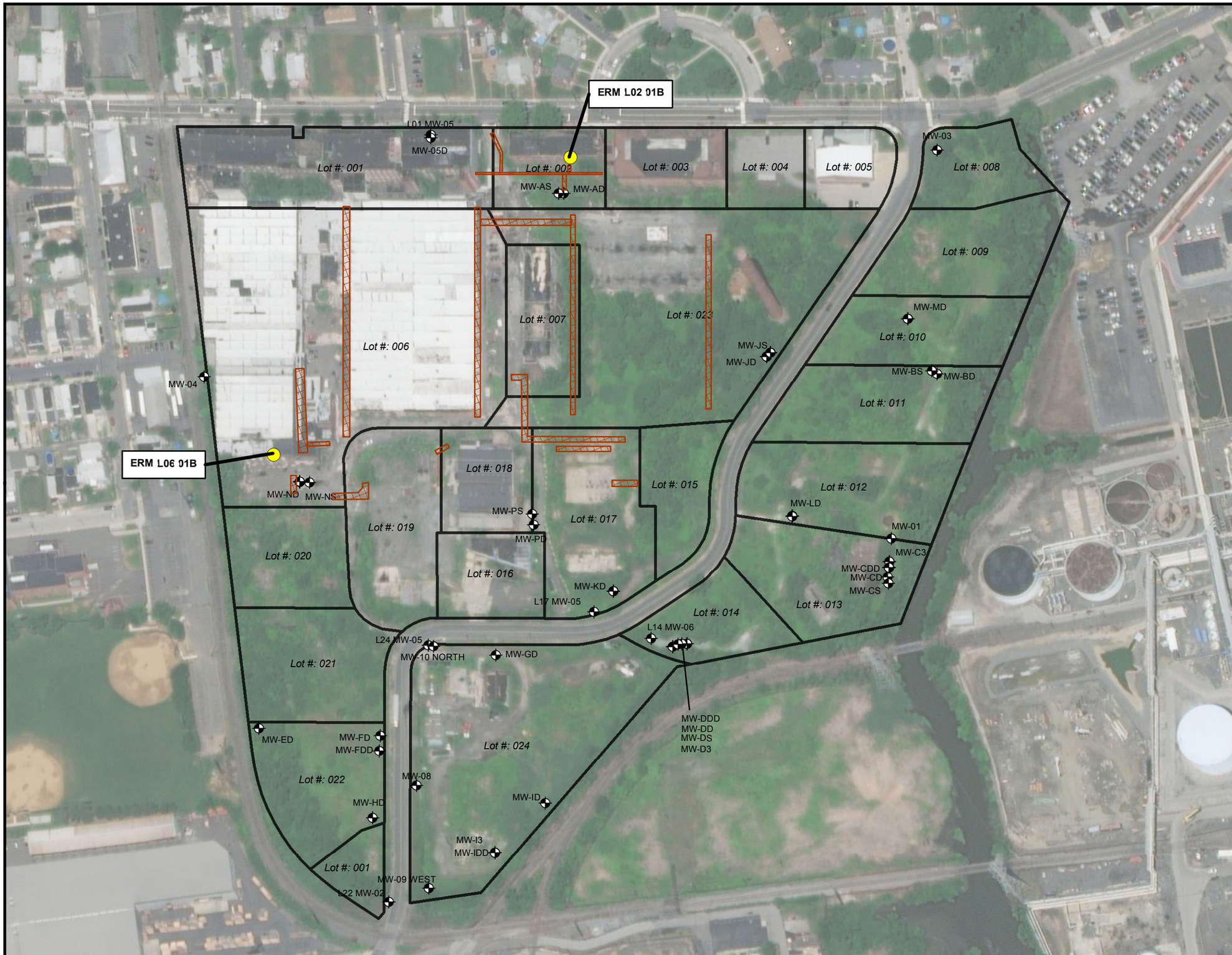
Notes:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.5 (2017)
2. Parcels Provided by Delaware County GIS.

0 90 180 360
Feet

FIGURE 23
Monitoring Well Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-MarcusHook_MXD\Conceptual Site Models\FINAL_FEB2018\FIGURE23-MonitorWellNetwork_20180226.mxd - steven.vickery - 6/13/2018



Legend

- Monitoring Well
- Basement Sample Location
- Tunnel Locations
- Parcel Boundary

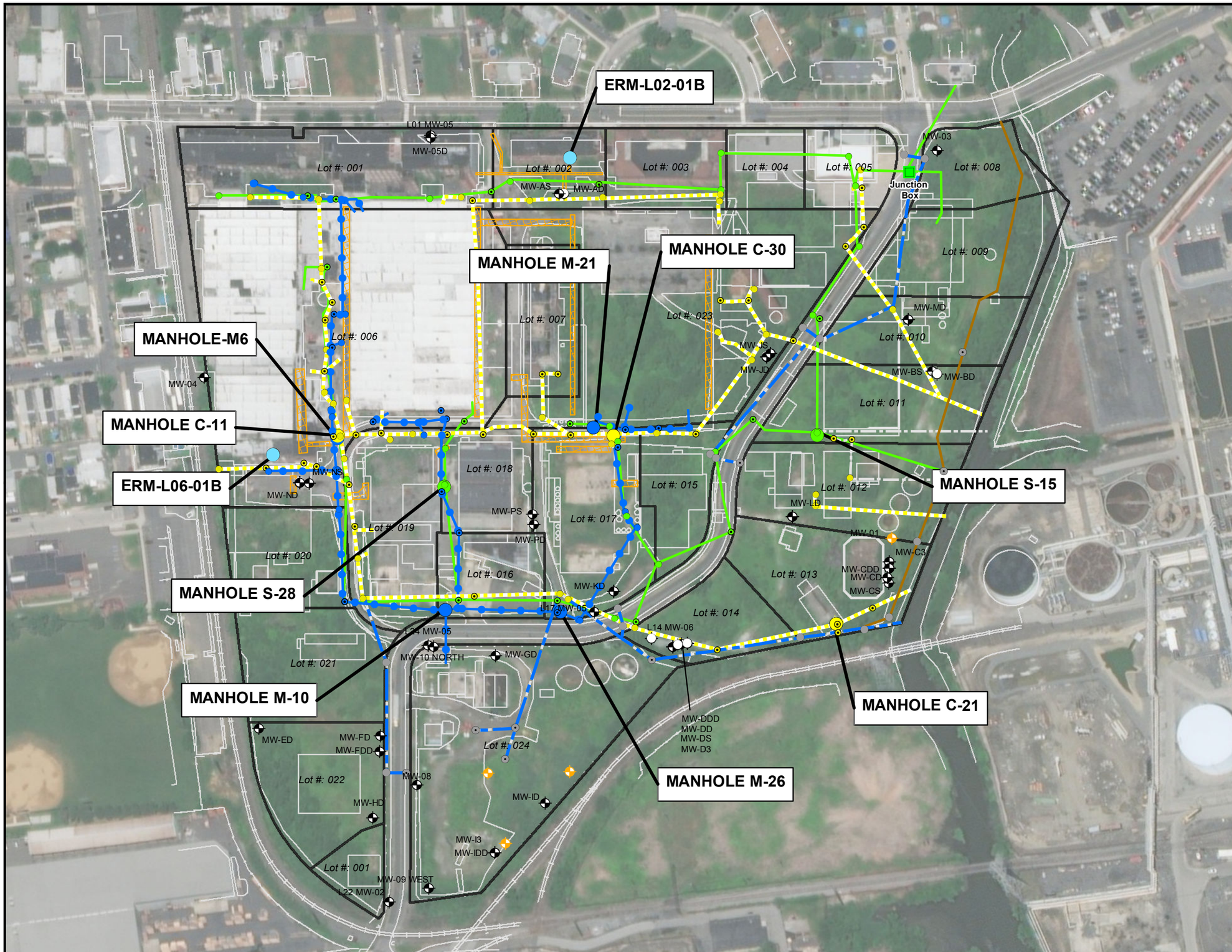
Notes:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4 (2015)
2. Parcels Provided by Delaware County GIS.
3. Tunnel locations were obtained from American Viscose Sectional Plot Plans dated September 8, 1952
4. Tunnel locations are approximate.

0 90 180 360
Feet

FIGURE 24
Basement Sample Locations
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\MC-Marcus Hook\ MXD\Conceptual Site Models\FINAL_FEB2018\FIGURE24-BasementSmplLocations_20171013.mxd - steven.vickery - 5/3/2018



Legend

- Monitoring Well
- Basement Sample Location
- Storm Water Manhole Sample Location
- Mill Waste Manhole Sample Location
- Sanitary Manhole Sample Location
- Borough Storm Sewer Manhole
- Storm Sewer Manhole
- Sanitary Sewer Manhole
- Mill Sewer Manhole
- Storm Sewer Network
- Mill Sewer Network
- Sanitary Sewer Network
- Borough Storm Sewer Line
- Abandoned Sanitary Sewer Line
- Borough Sanitary Sewer Line
- Tunnel Locations
- Parcel Boundary

Notes:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4 (2015)
2. Parcels Provided by Delaware County GIS.
3. Sewer, manhole network and tunnel locations were obtained from American Viscose Sectional Plot Plans dated September 8, 1952
4. Former sewer manhole junction box and tunnel locations are approximate.
5. Borough of Marcus Hook sewer and manhole locations were obtained from the "Final Subdivision Plan for Marcus Hook Business and Commerce Center Plan" dated August 7, 1987.

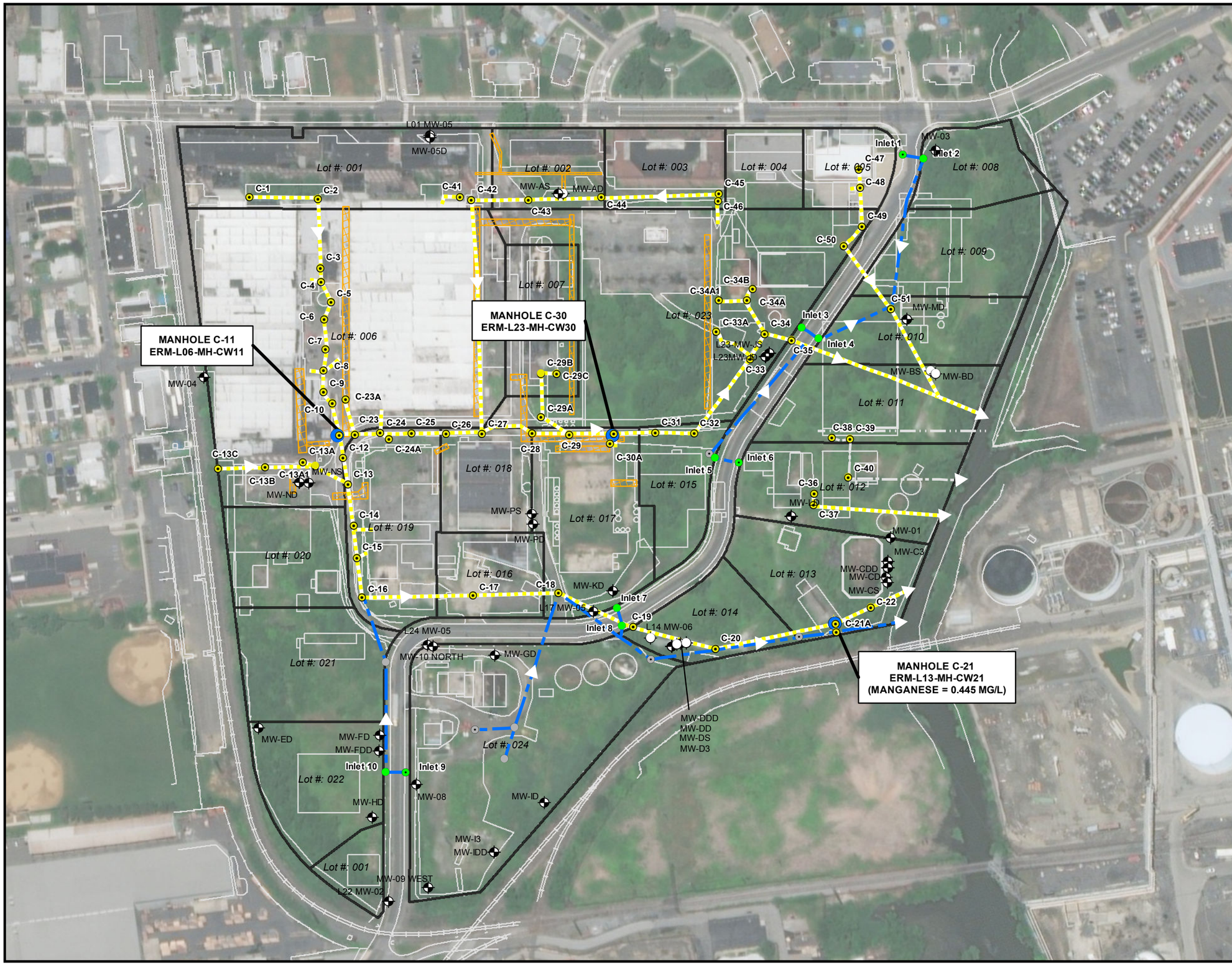
N

0 90 180 360
Feet

FIGURE 25
Subsurface Structure and Sample Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-Marcus Hook_MXD\Conceptual Site Models\FINAL_FEB2018\REVISED_20180723\FIGURE25-SewerNetworkPlan_20180226.mxd - steven.vickery - 7/25/2018



Legend

- Monitoring Well
- Manhole
- Borough Storm Sewer Manhole
- Borough Storm Water Inlet
- Borough Storm Sewer Manhole
- Storm Sewer Sample Location
- Flow Direction
- Storm Sewer Network
- Borough Storm Sewer Line
- Abandoned Sanitary Sewer Line
- Tunnel Locations
- Parcel Boundary

Notes:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4 (2015)
2. Parcels Provided by Delaware County GIS.
3. Sewer, manhole network and tunnel locations were obtained from American Viscose Sectional Plot Plans dated September 8, 1952
4. Sewer, manhole, junction box and tunnel locations are approximate. Some manholes cannot be located.
5. Borough of Marcus Hook sewer and manhole locations were obtained from the "Final Subdivision Plan for Marcus Hook Business and Commerce Center Plan" dated August 7, 1987.
6. PADEP Medium Specific Concentrations (MSCs) for organic and inorganic regulated substances in used non-residential aquifiers TDS < 2,500
   a. Lead = 0.005 mg/L
   b. Manganese = 0.3 mg/L

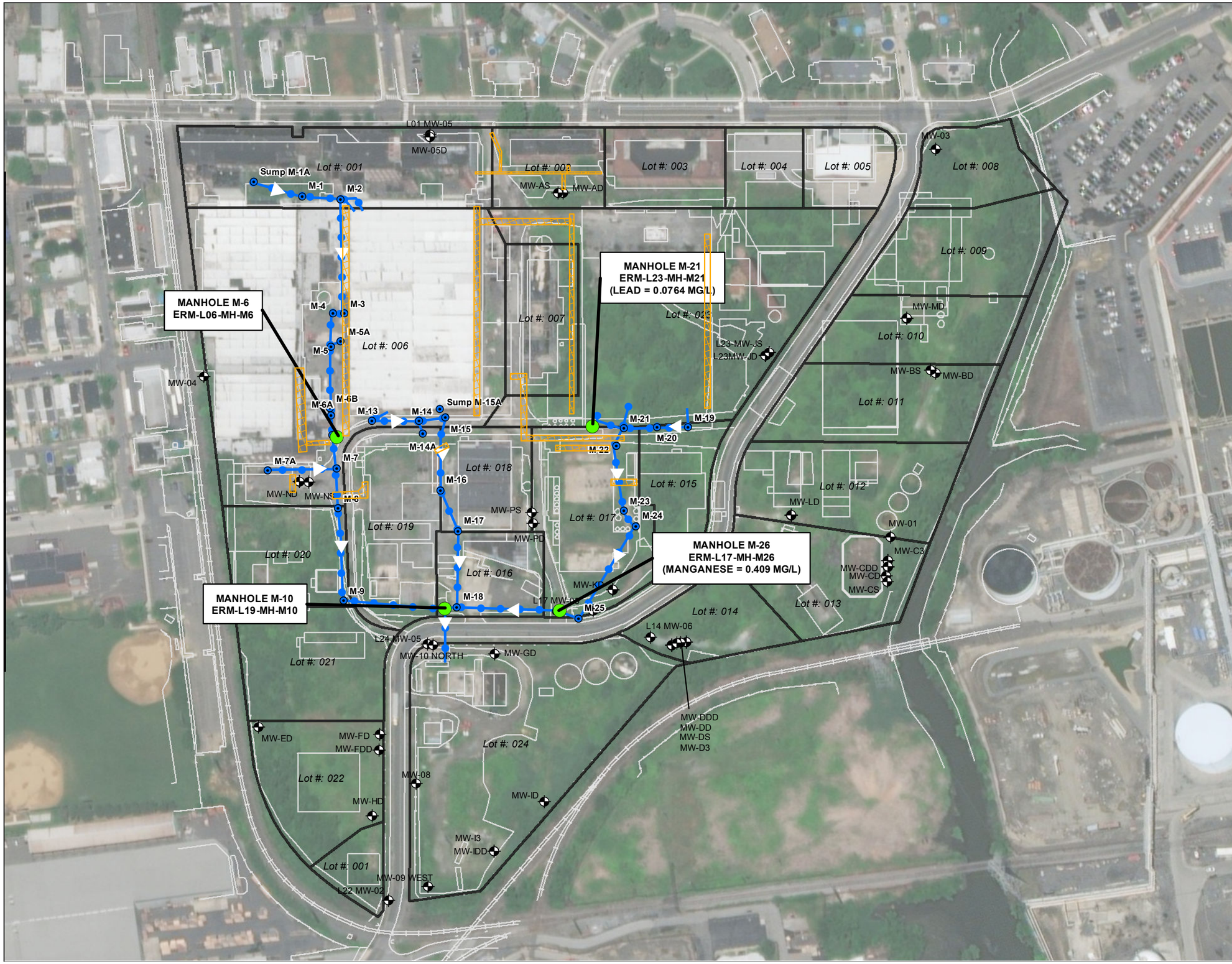
N

0 90 180 360
Feet

FIGURE 26
Clean Water Storm Sewer Network
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\PMC-MarcusHook_MXD\Conceptual Site Model\FINAL_FEB2018\REVISED_20180723\FIGURE26-StormSewerNetwork_20180723.mxd - steven.vickery - 7/25/2018



Legend

- Monitoring Well
- Manhole
- Mill Waste Manhole Sample Location
- Flow Direction
- Mill Waste Sewer Network
- Tunnel Locations
- Parcel Boundary

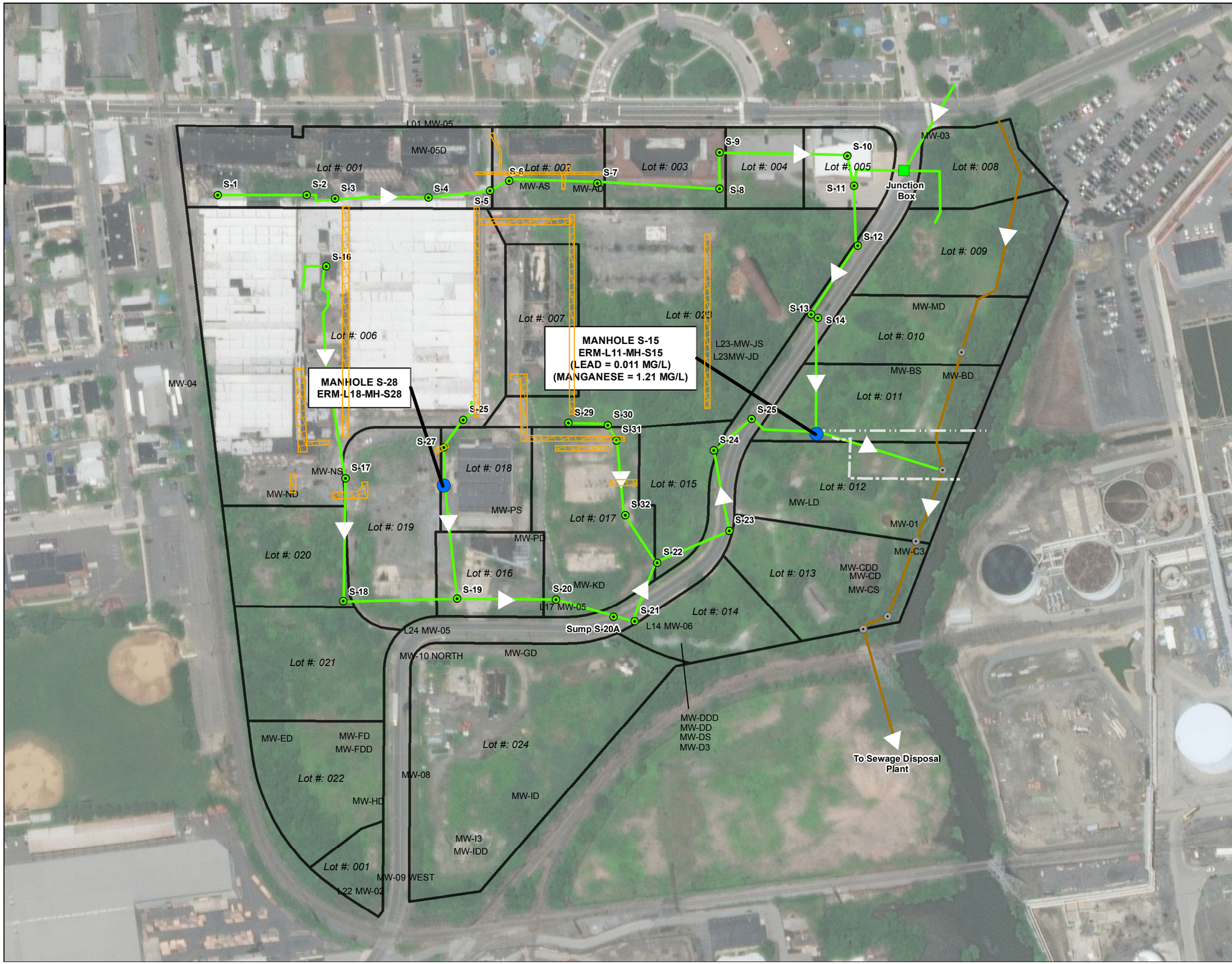
Notes:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4 (2015)
2. Parcels Provided by Delaware County GIS.
3. Sewer, manhole network and tunnel locations were obtained from American Viscose Sectional Plot Plans dated September 8, 1952
4. Sewer, manhole, junction box and tunnel locations are approximate. Some manholes cannot be located.
5. PADEP Medium Specific Concentrations (MSCs) for organic and inorganic regulated substances in used non-residential aquifiers TDS < 2,500
   a. Lead = 0.005 mg/L
   b. Manganese = 0.3 mg/L

0 90 180 360
Feet

FIGURE 27
Mill Waste Sewer Network
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-Marcus Hook_MXD\Conceptual Site Models\FINAL_FEB2018\REVISED_20180723\FIGURE27-SewerMillNetwork_20171009.mxd - steven.vickery - 7/25/2018



Legend

- Monitoring Well No Longer Present
- Monitoring Well
- Manhole
- Borough Sanitary Manhole
- Sanitary Sewer Manhole Sample Location
- Flow Direction
- Junction Box
- Abandoned Sanitary Sewer Line
- Borough Sanitary Sewer Line
- Sanitary Sewer Network
- Tunnel Locations
- Parcel Boundary

Notes:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4 (2015)
2. Parcels Provided by Delaware County GIS.
3. Sewer, manhole network and tunnel locations were obtained from American Viscose Sectional Plot Plans dated September 8, 1952
4. Sewer, manhole, junction box and tunnel locations are approximate. Some manholes cannot be located.
5. Borough of Marcus Hook sewer and manhole locations were obtained from the "Final Subdivision Plan for Marcus Hook Business and Commerce Center Plan" dated August 7, 1987.
6. PADEP Medium Specific Concentrations (MSCs) for organic and inorganic regulated substances in used non-residential aquifiers TDS < 2,500
   a. Lead = 0.005 mg/L
   b. Manganese = 0.3 mg/L

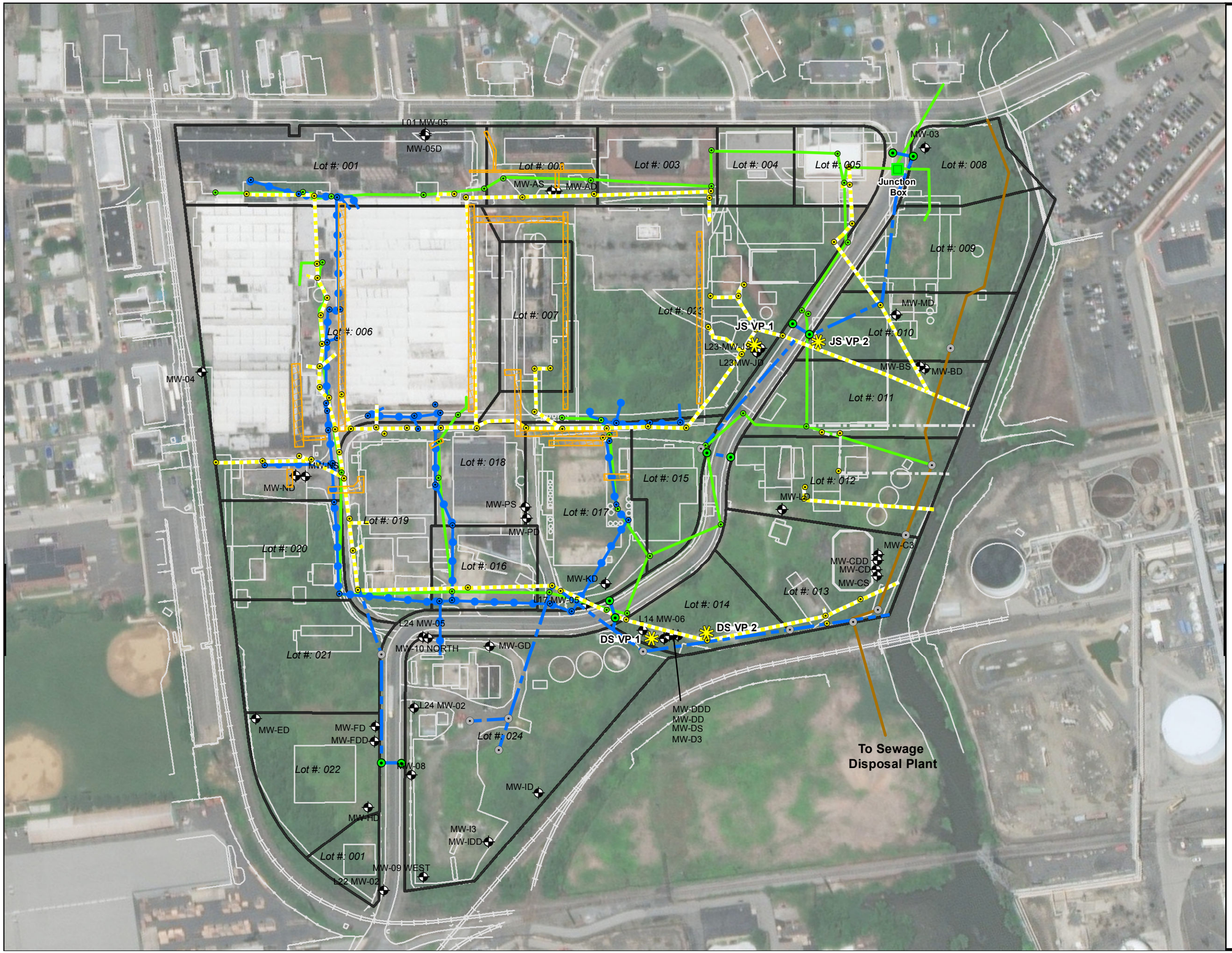
N

0 90 180 360
Feet

FIGURE 28
Sanitary Sewer Network
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-Marcus Hook_MXD\Conceptual Site Models\FINAL_FEB2018\REVISED_20180723\FIGURE28-SanitarySewerNetwork_20171009.mxd - steven.vickery - 8/20/2018



Legend

- Near Source Soil Vapor Sample Location
- Monitoring Well
- Borough Inlet
- Borough Sewer Manhole
- Storm Sewer Manhole
- Sanitary Sewer Manhole
- Mill Sewer Manhole
- Storm Sewer Network
- Mill Waste Sewer Network
- Sanitary Sewer Network
- Abandoned Sanitary Sewer Line
- Borough Sanitary Sewer Line
- Borough Storm Sewer Line
- Tunnel Locations
- Parcel Boundary

Notes:

1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4 (2015)
2. Parcels Provided by Delaware County GIS.
3. Sewer, manhole network and tunnel locations were obtained from American Viscose Sectional Plot Plans dated September 8, 1952
4. Sewer, manhole, junction box and tunnel locations are approximate. Some manholes cannot be located.
5. Borough of Marcus Hook sewer and manhole locations were obtained from the "Final Subdivision Plan for Marcus Hook Business and Commerce Center Plan" dated August 7, 1987.
6. Analytical results from August 2017 quarterly groundwater sampling event.
7. PADEP Medium Specific Concentrations (MSCs) for organic and inorganic regulated substances in used non-residential aquifiers TDS ≤ 2,500
   - 1,1 DCE = 0.007 mg/L
   - TCE = 0.005 mg/L
   - PCE = 0.005 mg/L
   - 1,2,4 TCB = 0.07 mg/L

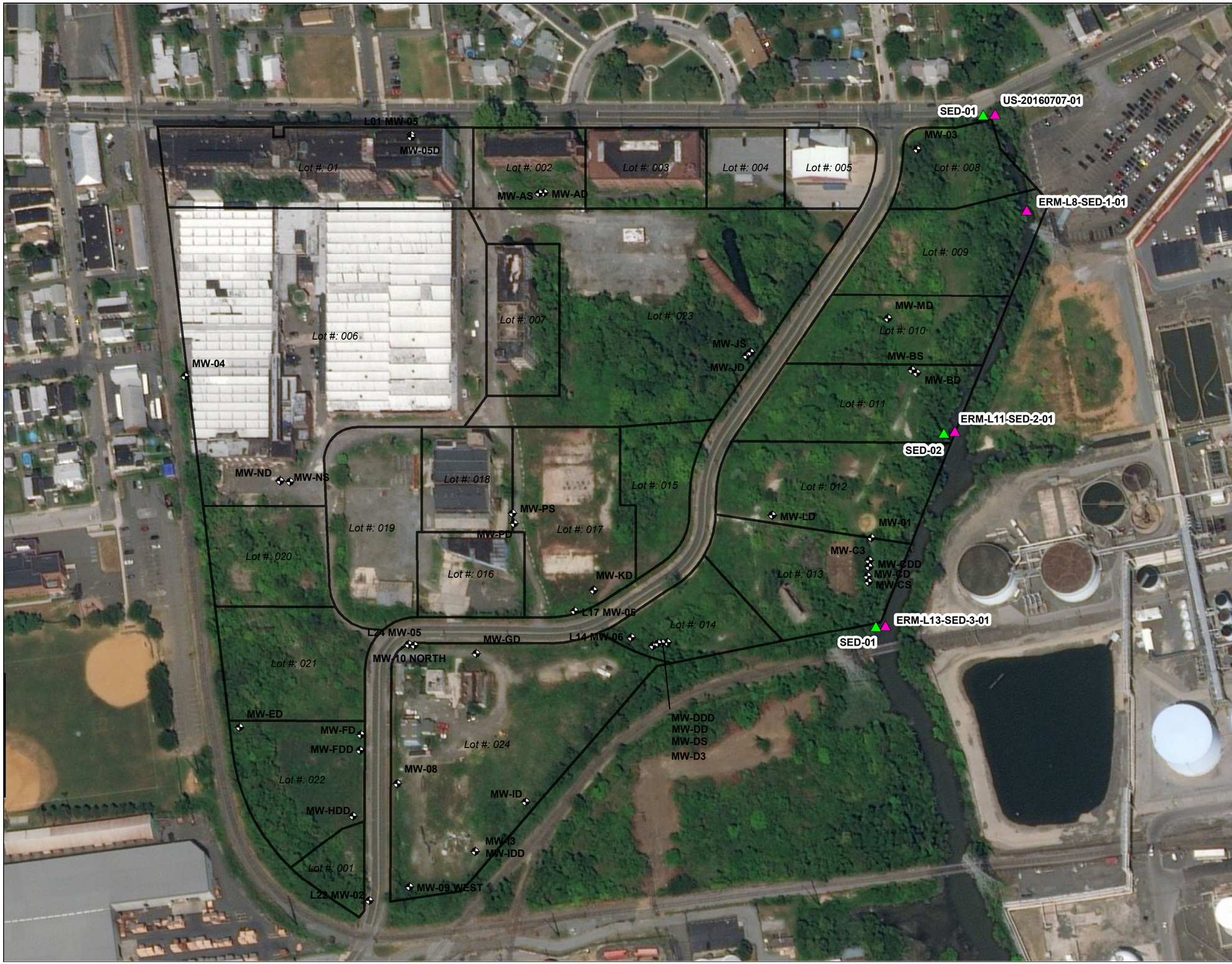
0 90 180 360
Feet

FIGURE 29

Near Source Soil Vapor Sample and Preferential Pathway Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-Marcus Hook_MXD\Conceptual Site Models\FINAL_FEB2018REV7\SED_20180723\FIGURE29-NearSourceSoilVaporLocations_20180226.mxd - steven.vickery - 1/22/2019



Legend

- 2016 Sediment Sample Location
- 2004 Sediment Sample Location
- Monitor Well
- Parcel Boundary

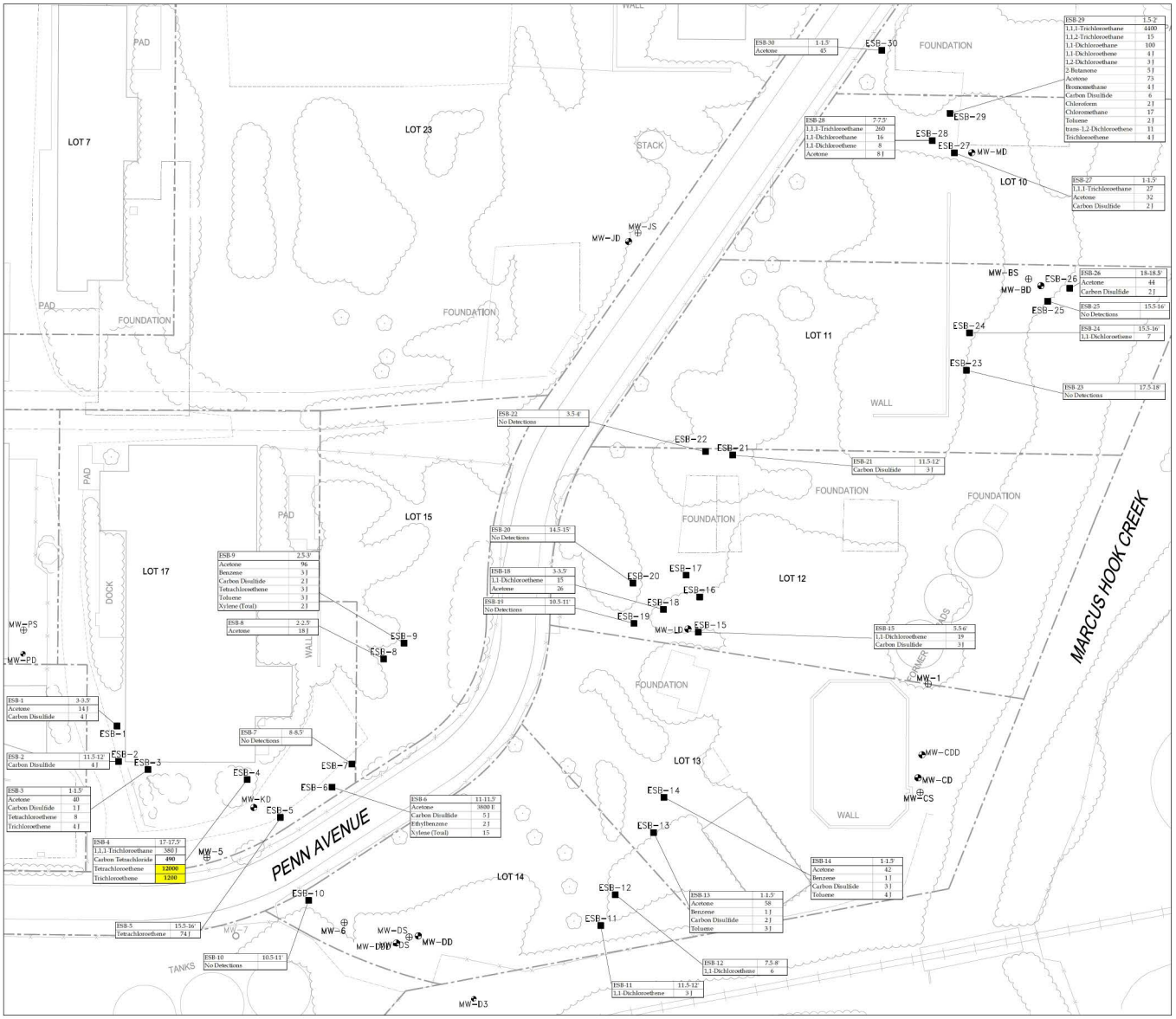
Notes:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4 (2015)
2. Parcels Provided by Delaware County GIS.

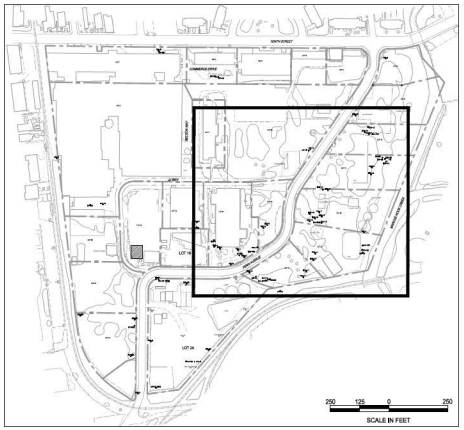
0 90 180 360
Feet

FIGURE 30
2016 Sediment Sample Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-Marcus Hook_MXD\Lot Exceedence Figures\FINAL_FEB2018\FIGURES\2-SedimentSampleLocationPlan_20180202.mxd - summer.kring - 2/8/2018





LEGEND

- PROPERTY LINE
- FENCE
- RAILROAD
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- DESTROYED MONITORING WELL
- FORMER CS_2 STORAGE AREA
- ERM SOIL BORING - NOVEMBER 2010

Notes:
Samples collected between 9 and 12 November 2010
J = Estimated Concentration
Concentrations reported in ug/kg.
Highlighted values exceed the Pennsylvania soil to groundwater criteria for used aquifers with TDS<2500.

40 20 0 40
SCALE IN FEET

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

EAST 10th STREET HSCA SITE

MARCUS HOOK PENNSYLVANIA

Environmental Resources Management
Exton, Pennsylvania 19341 (610) 524-3500

ERM

CHECKED		DATE
DESIGN ENGINEER		
PROJECT ENGINEER		
PROJECT MANAGER		
APPROVED		
APPROVED		

FIGURE 31
SOIL SAMPLE RESULTS
NOVEMBER 2010

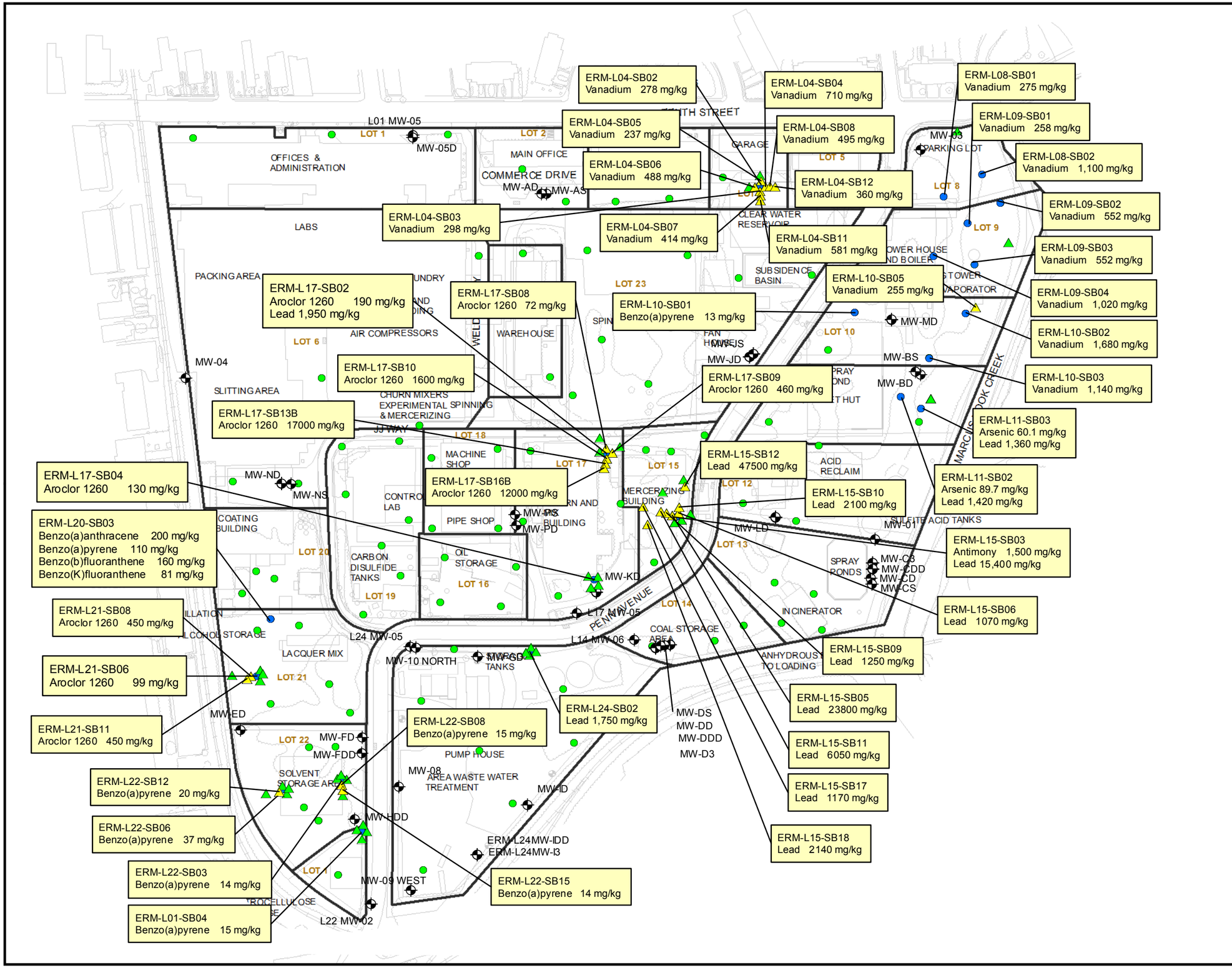
DRAWN MLB	DATE 11-1-10	CLIENT APPROVAL	
SCALE AS SHOWN	W.O. No. 0118947	ISSUED FOR	DATE

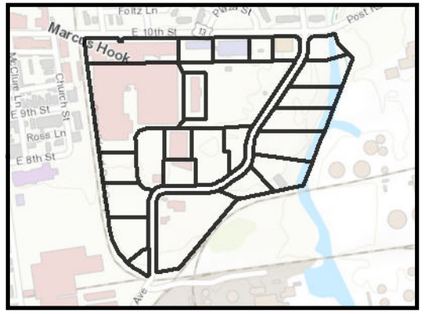
DRAWING NO.

REV. NO.

SHEET OF

\\cephas\O:\Data\Team\0800\1242\Drawings\PDC_Arrow_Rev4\0421245A338.dwg





Legend

Monitoring Well

Soil Results (0-2 ft)

- Did not Exceed PADEP Non-Residential Statewide Health Standard
- Exceeded PADEP Non-Residential Statewide Health Standard
- Step-Out Soil Sample Location Exceed PADEP Non-Residential Statewide Health Standard
- Step-Out Soil Sample Location Did not Exceed PADEP Non-Residential Statewide Health Standard
- Parcel Boundary

NOTES:

1. PADEP Non-Residential Statewide Health Standard for:

Aroclor 1260 is 46 mg/kg
Antimony is 1,300 mg/kg
Arsenic is 61 mg/kg
Lead is 1,000 mg/kg
Benzo(a)pyrene is 12 mg/kg
Benzo(a)anthracene is 130 mg/kg
Benzo(b)flouranthene is 76 mg/kg
Benzo(k)fluoranthene 76 mg/kg
Vanadium 220 mg/kg

2. MSC - Medium Specific Concentration

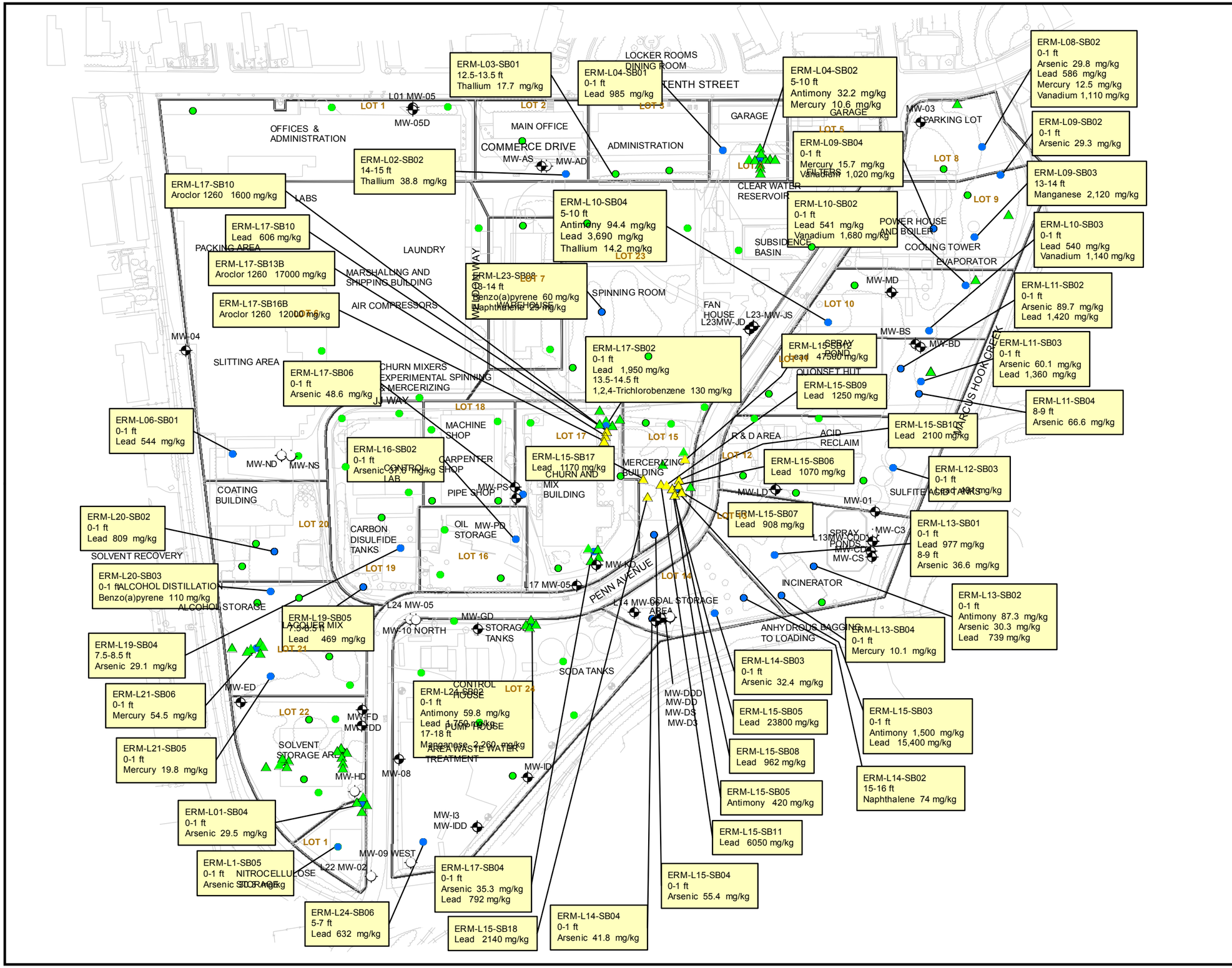
0 90 180 360
Feet

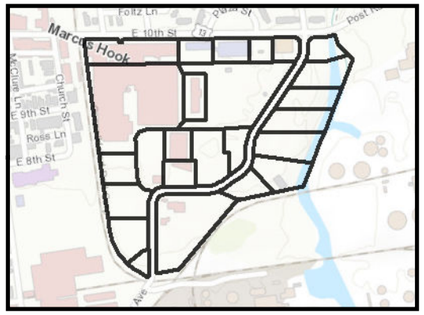
FIGURE 32

2015-2017 Surface Soil Samples Compared to Direct Contact 0-2 ft MSCs
E. 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-MarcusHook_MXD\Lot Exceedence Figures\FINAL_FEB2018\REVISED_20180723\FIGURE32-FMC_MarcusHook_DC_0_2ft_Combined_CAD_20180130.mxd - steven vickery - 8/2/2018





Legend

Monitoring Well

Soil Results

- Did not Exceed PADEP Non-Residential Statewide Health Standard
- Exceeded PADEP Non-Residential Statewide Health Standard
- Step-Out Soil Sample Location Exceed PADEP Non-Residential Statewide Health Standard
- Step-Out Soil Sample Location Did not Exceed PADEP Non-Residential Statewide Health Standard

NOTES:

1. PADEP Non-Residential Statewide Health Standard for:
   Antimony is 27 mg/kg
   Arsenic is 29 mg/kg
   Lead is 450 mg/kg
   Manganese is 2,000 mg/kg
   Mercury is 10 mg/kg
   Thallium is 14 mg/kg
   Vanadium is 820 mg/kg
   1,2,4-Trichlorobenzene is 27 mg/kg
   Benzo(a)pyrene is 46 mg/kg
   Naphthalene is 25 mg/kg
2. MSC - Medium Specific Concentration

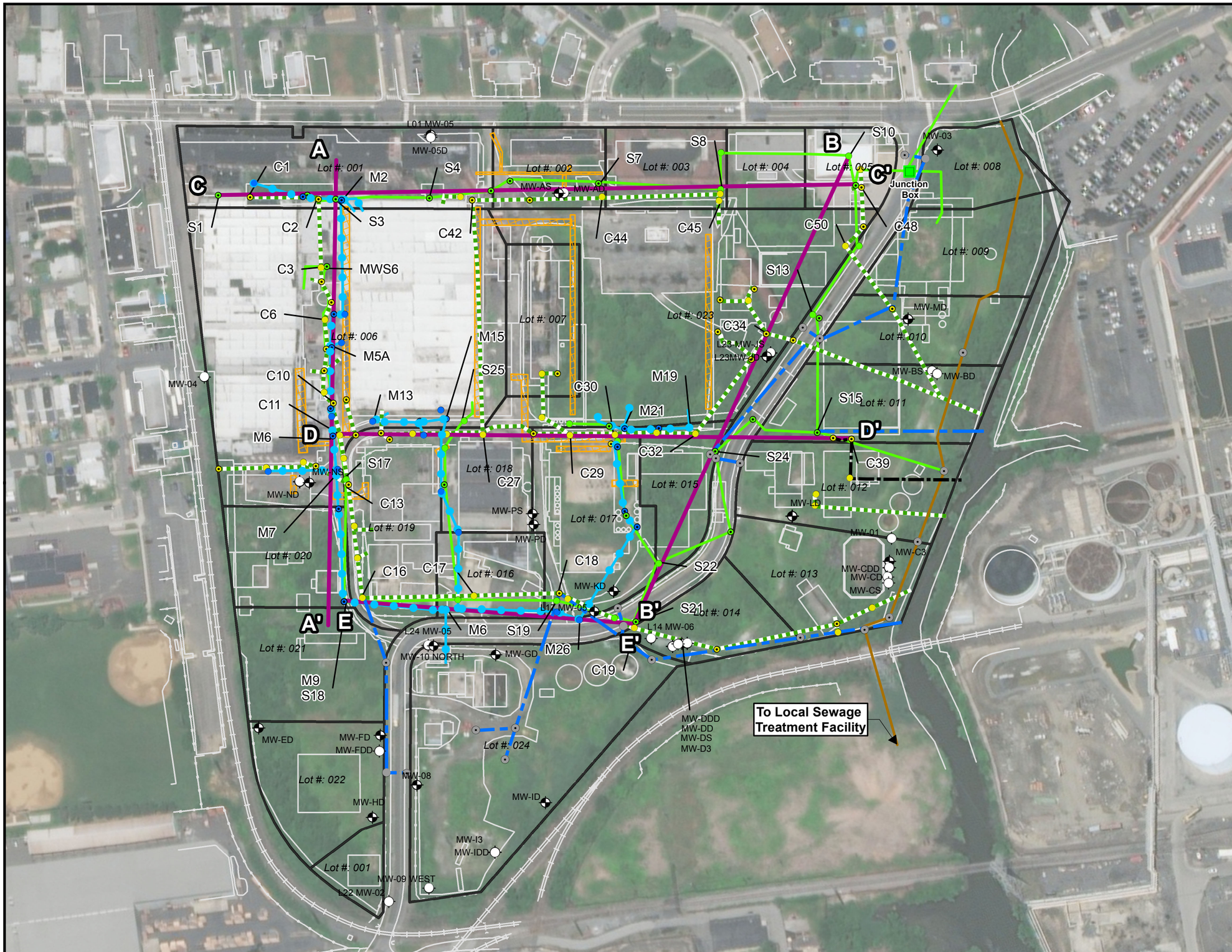
N

0 90 180 360
Feet

FIGURE 33
Surface and Subsurface Soil Samples Compared to Soil to Groundwater MSCs
E. 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-Marcus Hook_MXD\Lot Exceedance Figures\FINAL_FEB2018\REVISED_20180723\FIGURE33-FMC_Marcus Hook_Exceed_STGW_CAD_20180130.mxd - steven.vickery - 8/2/2018



Legend

- Monitoring Well
- Borough Storm Sewer Manhole
- Storm Sewer Manhole
- Sanitary Sewer Manhole
- Mill Sewer Manhole
- Storm Sewer Network
- Mill Sewer Network
- Sanitary Sewer Network
- Abandoned Sewer Line
- Subgrade Structure Cross Sections
- Borough Sanitary Sewer Line
- Borough Storm Sewer Line
- Tunnel Locations
- Parcel Boundary

Notes:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4 (2015)
2. Parcels Provided by Delaware County GIS.
3. Sewer, manhole network and tunnel locations were obtained from American Viscose Sectional Plot Plans dated Sepetember 8, 1952
4. Former sewer manhole junction box and tunnel locations are approximate.
5. Borough of Marcus Hook sewer and manhole locations were obtained from the "Final Subdivision Plan for Marcus Hook Business and Commerce Center Plan" dated August 7, 1987.

N

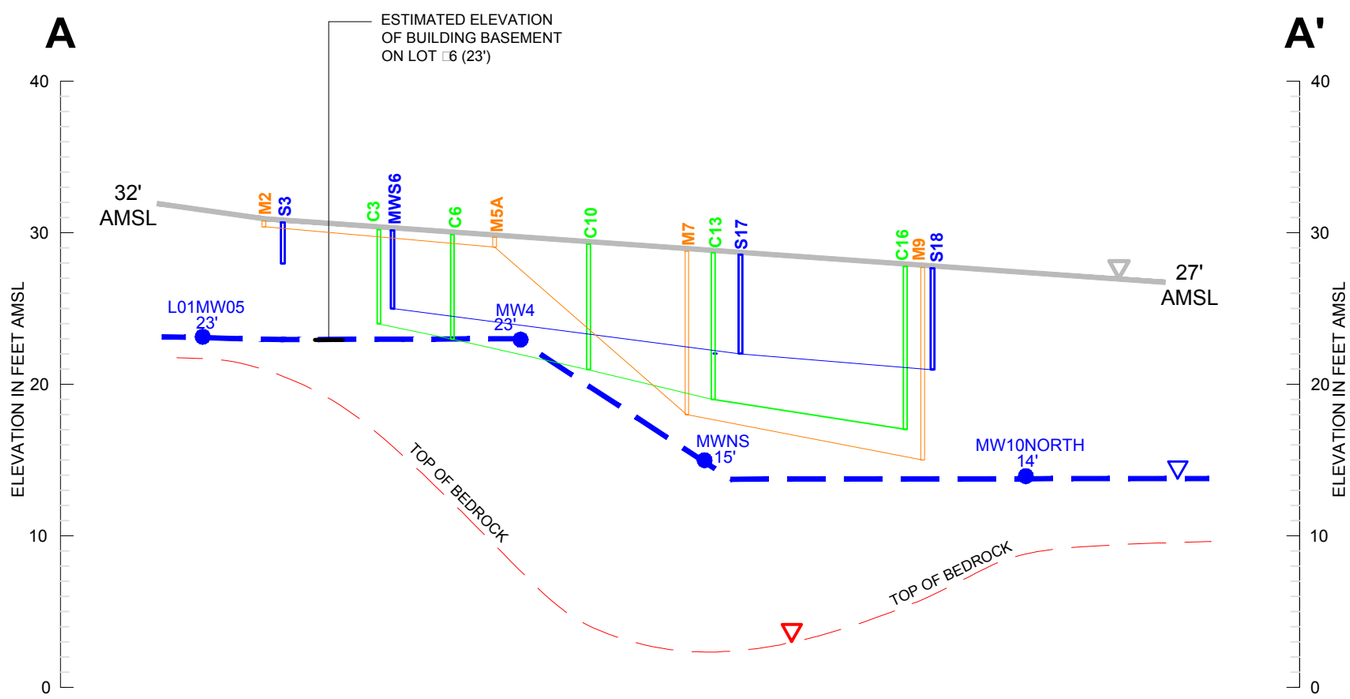
0 90 180 360
Feet

FIGURE 34
Subsurface Structures Cross-Section Location Plan
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FNC-Marcus\Hook_IXD\Conceptual Site Model\FINAL_FEB2018\FIGURE34-SubsurfaceStructureCrossSectionLocationPlan_20171230.mxd - steven.vickery - 8/10/2018

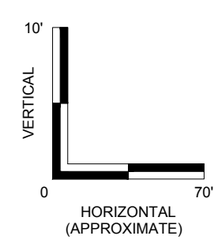
FIGURE 35
CROSS SECTION A-A'
SU□ SURFACE STRUCTURES
EAST 10th STREET
MARCUS HOOK, PENNSYLVANIA



LEGEND

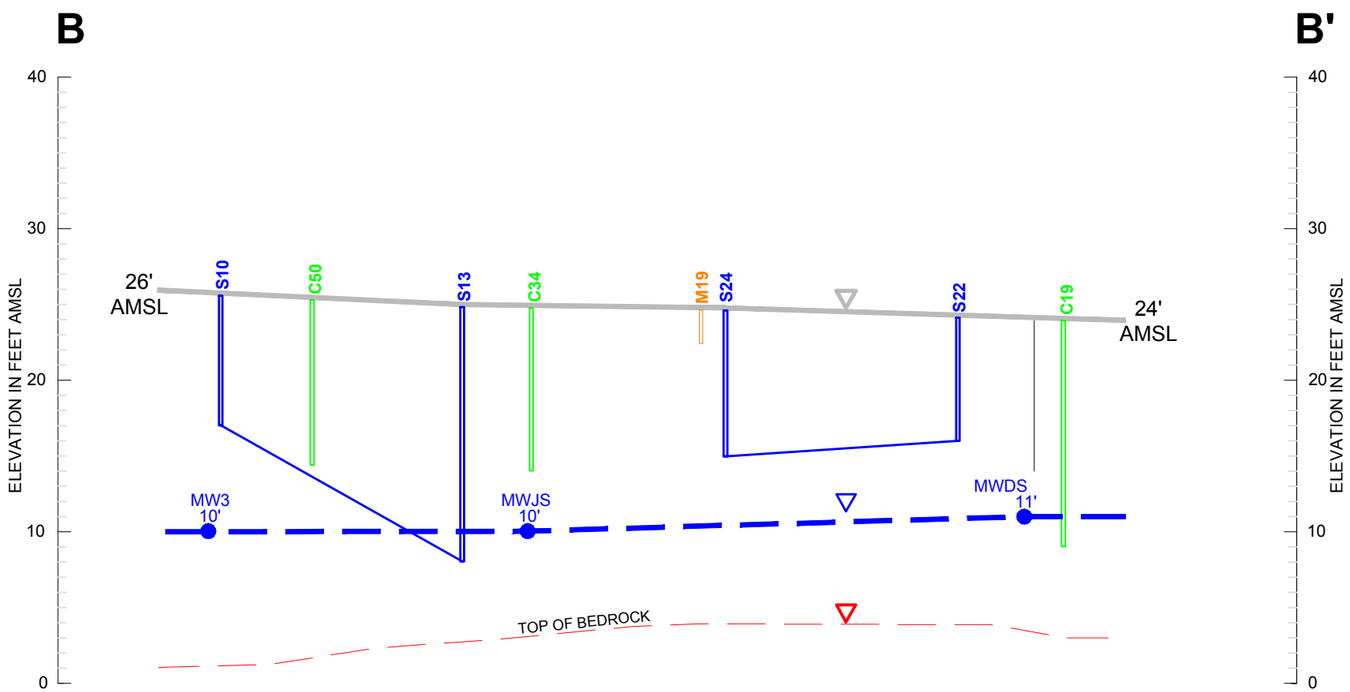
- C6 = CLEAN WATER/STORM WATER MANHOLE □6
- M2 = MILL WASTE MANHOLE □2
- S3 = SANITARY MANHOLE □3
- TOP OF OVERBURDEN GROUNDWATER TABLE IN FEET ABOVE MEAN SEA LEVEL
- 23' OVERBURDEN GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- TOP OF BEDROCK
- TOP OF OVERBURDEN WATER TABLE
- GROUND SURFACE

NOTE: LINES CONNECTING MANHOLES INDICATE THE MANHOLES ARE CONNECTED TO THE SAME SEWER LINE□



Q:□T□□m□DMMV□CAD□Dr□□□g□FMC□M□r□□□H□□k□0461092□A310□d□g, S□□□: 1:10

FIGURE 36
CROSS SECTION B - B'
SUSURFACE STRUCTURES
EAST 10th STREET
MARCUS HOOK, PENNSYLVANIA



LEGEND

- C50 = CLEAN WATER/STORM WATER MANHOLE □50
- M19 = MILL WASTE MANHOLE □19
- S10 = SANITARY MANHOLE □10
- TOP OF OVERBURDEN GROUNDWATER TABLE IN FEET ABOVE MEAN SEA LEVEL
- 10' OVERBURDEN GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- TOP OF BEDROCK
- TOP OF OVERBURDEN WATER TABLE
- GROUND SURFACE

NOTE: LINES CONNECTING MANHOLES INDICATE THE MANHOLES ARE CONNECTED TO THE SAME SEWER LINE□

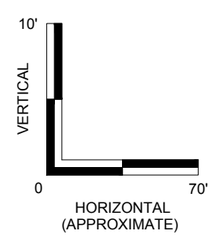


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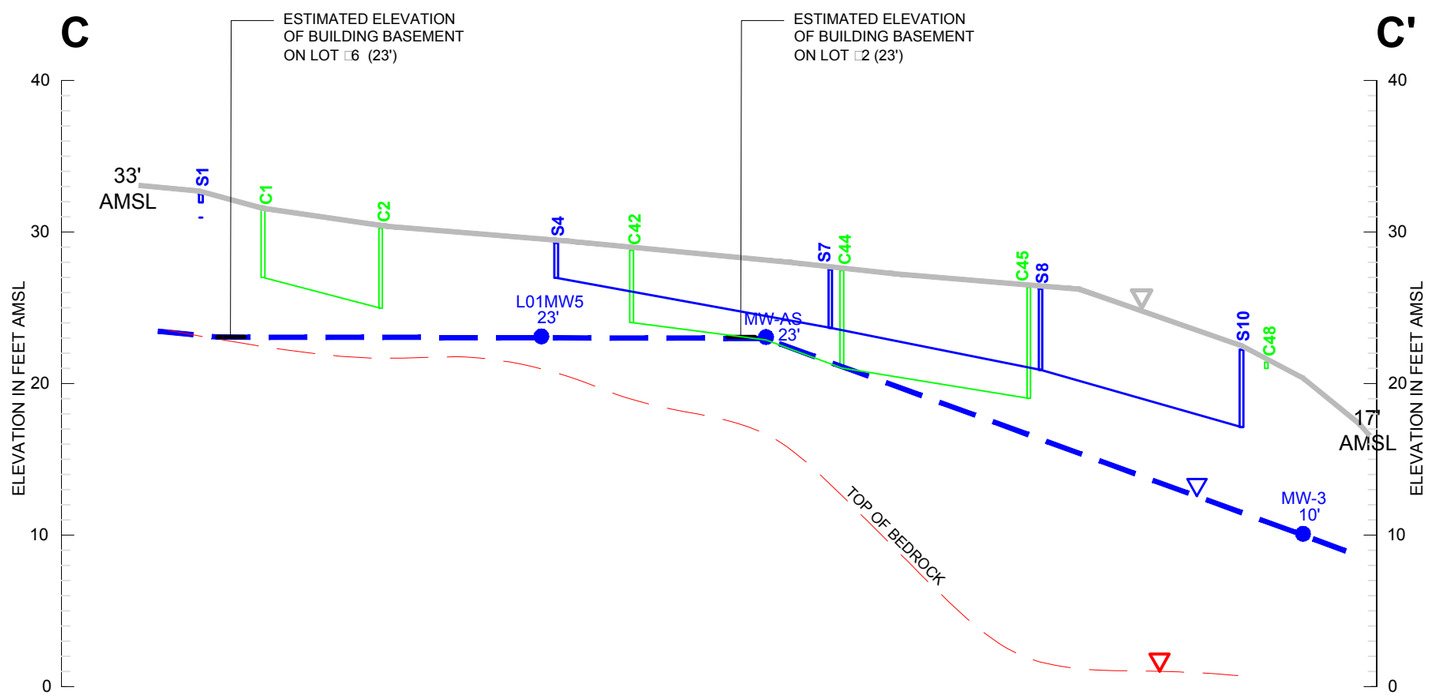
FIGURE 37
CROSS SECTION C-C'
SUSURFACE STRUCTURES
EAST 10th STREET
MARCUS HOOK, PENNSYLVANIA



LEGEND

C1 = CLEAN WATER/STORM WATER MANHOLE 1

S10 = SANITARY MANHOLE 10

TOP OF OVERBURDEN GROUNDWATER TABLE IN FEET ABOVE MEAN SEA LEVEL

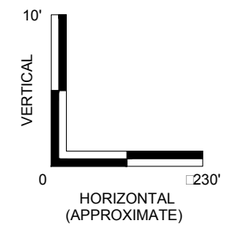
17' OVERBURDEN GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

TOP OF BEDROCK

TOP OF OVERBURDEN WATER TABLE

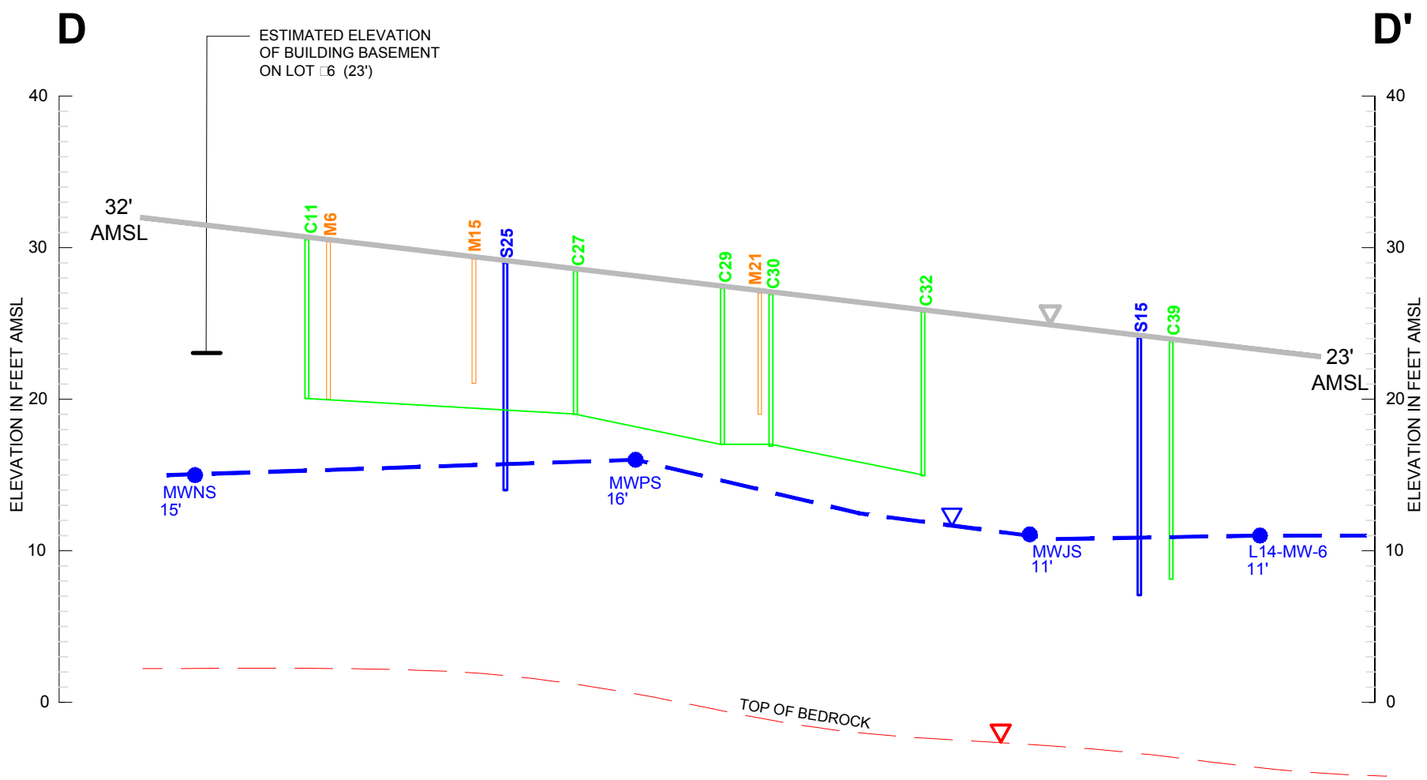
GROUND SURFACE

NOTE: LINES CONNECTING MANHOLES INDICATE THE MANHOLES ARE CONNECTED TO THE SAME SEWER LINE



Q:T m DMMV CAD Dr g FMC M r H k 0461092 A310 d g, S : 1:10

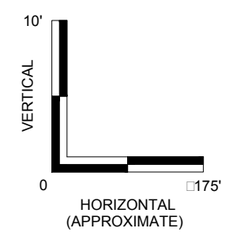
FIGURE 38
CROSS SECTION D-D'
SU□ SURFACE STRUCTURES
EAST 10th STREET
MARCUS HOOK, PENNSYLVANIA



LEGEND

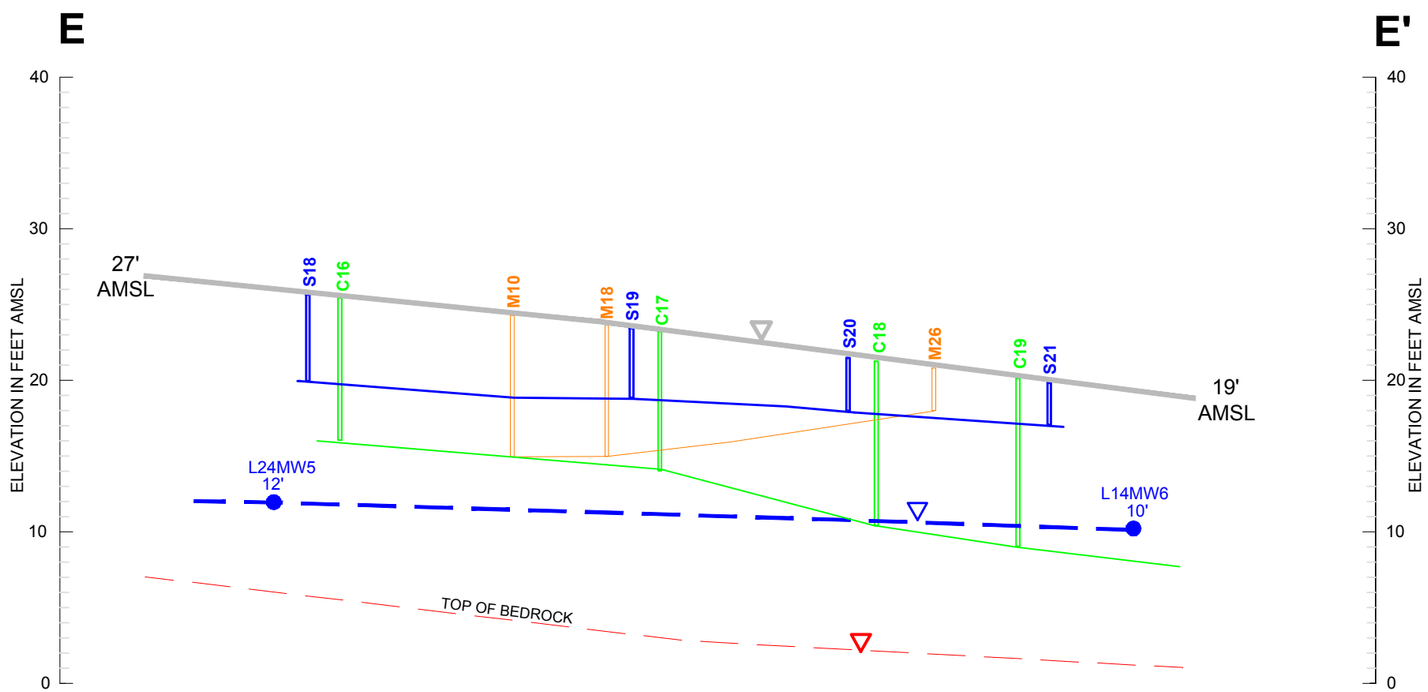
- C11 = CLEAN WATER/STORM WATER MANHOLE □11
- M21= MILL WASTE MANHOLE □21
- S25 = SANITARY MANHOLE □25
- TOP OF OVERBURDEN GROUNDWATER TABLE IN FEET ABOVE MEAN SEA LEVEL
- 16' OVERBURDEN GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- TOP OF BEDROCK
- TOP OF OVERBURDEN WATER TABLE
- GROUND SURFACE

NOTE: LINES CONNECTING MANHOLES INDICATE THE MANHOLES ARE CONNECTED TO THE SAME SEWER LINE□



Q:□T□□m□DMMV□CAD□Dr□□□□g□FMC□M□r□□□H□□k□0461092□A310□d□g, S□□□: 1:10

FIGURE 39
CROSS SECTION E-E'
SUSURFACE STRUCTURES
EAST 10th STREET
MARCUS HOOK, PENNSYLVANIA



LEGEND

C16 = CLEAN WATER/STORM WATER MANHOLE □16

M10 = MILL WASTE MANHOLE □10

S18 = SANITARY MANHOLE □18

TOP OF OVERBURDEN GROUNDWATER TABLE IN FEET ABOVE MEAN SEA LEVEL

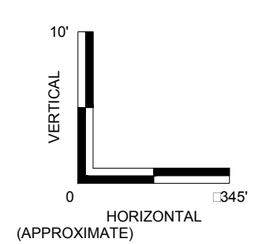
12' OVERBURDEN GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

TOP OF BEDROCK

TOP OF OVERBURDEN WATER TABLE

GROUND SURFACE

NOTE: LINES CONNECTING MANHOLES INDICATE THE MANHOLES ARE CONNECTED TO THE SAME SEWER LINE□



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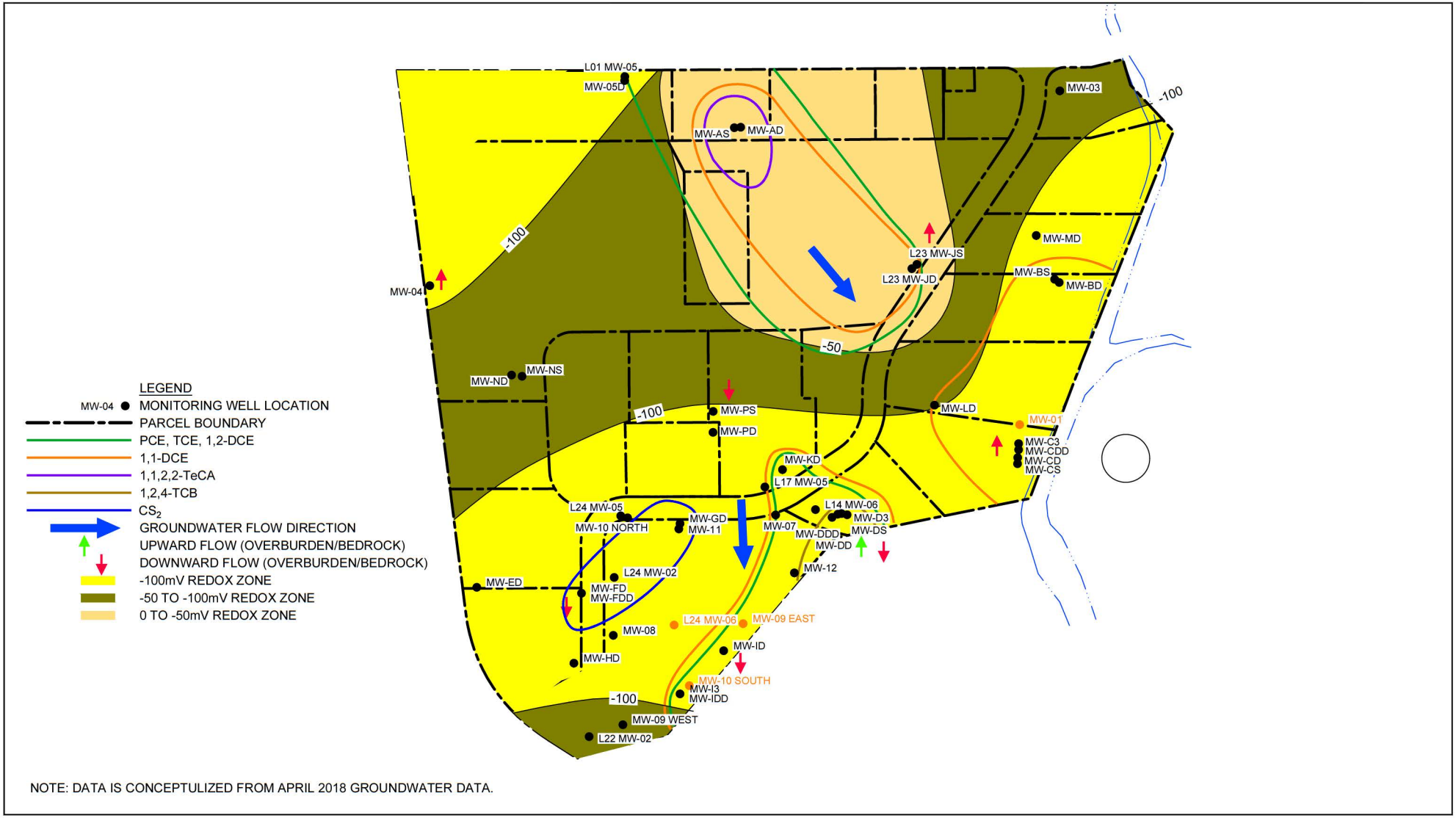


NOTE: DATA IS CONCEPTULIZED FROM APRIL 2018 GROUNDWATER DATA.

Source: Base created from ERM drawing file "XREF_Jan 2015-unfreeze layers". Sample locations digitized from ERM Figure 4 "Soil Results" dated 7/19/2016.

0 100 200ft

Coordinate System:
Pennsylvania South
State Plane NAD83

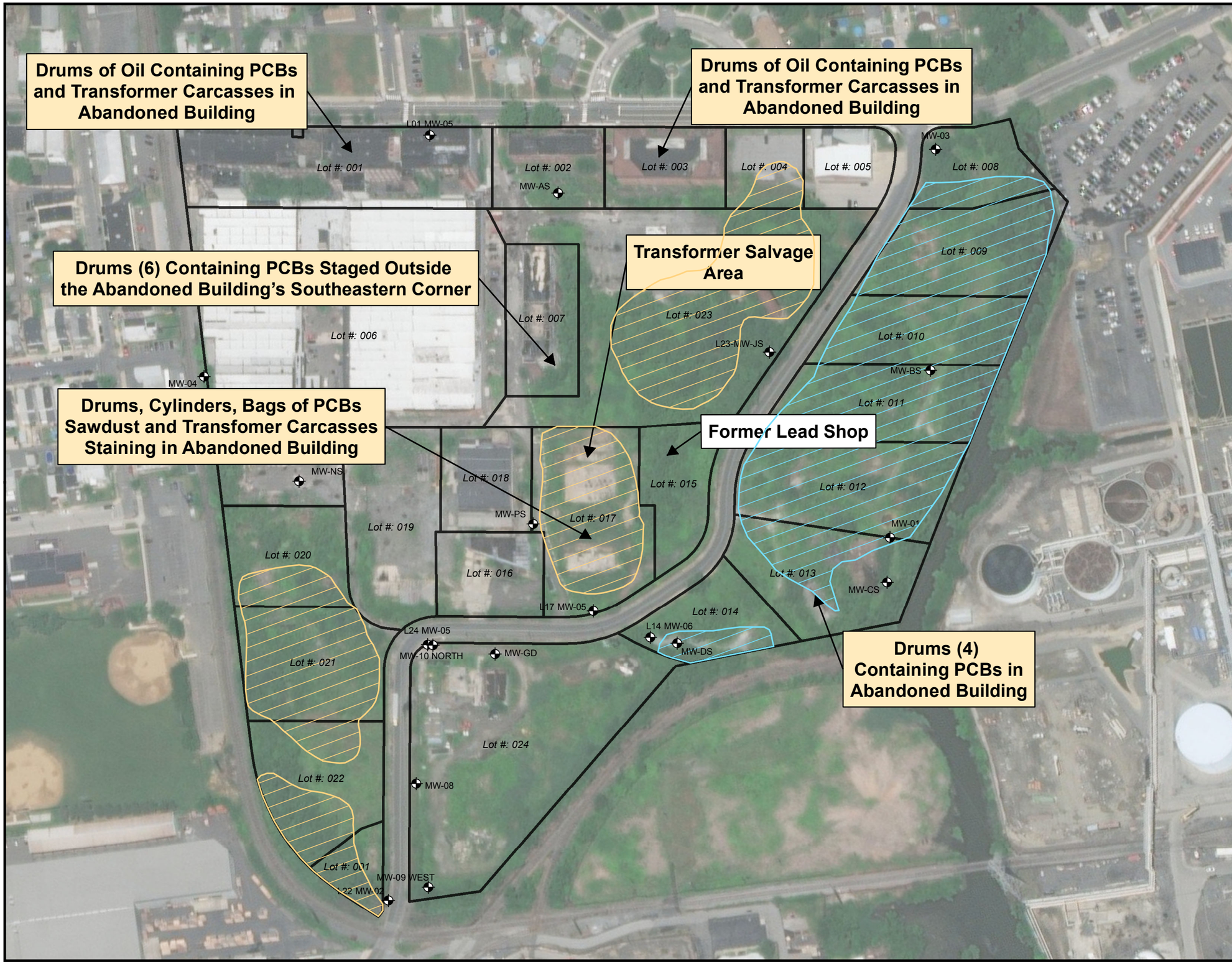
FMC
EAST 10TH STREET SITE, MARCUS HOOK, PENNSYLVANIA

11102670-00
Jul 16, 2018

CONCEPTUAL SITE MODEL

FIGURE 40

CAD File: P:\drawings\11100000s\11102670\11102670-PRES\11102670-00(PRES001)\11102670-00(PRES001)GN\11102670-00(PRES001)GN-WA002.DWG



Legend

- Monitoring Well
- Building Debris Containing Asphalt, Railroad Ties, Concrete, Brick, Wood, Metal
- Coal Material/Debris Containing Coal, Ash, Slag, Bricks, Concrete, Asphalt
- Denotes Activities that were after FMC Ownership
- Parcel Boundary

Notes:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4 (2015)
2. Parcels Provided by Delaware County GIS.

N

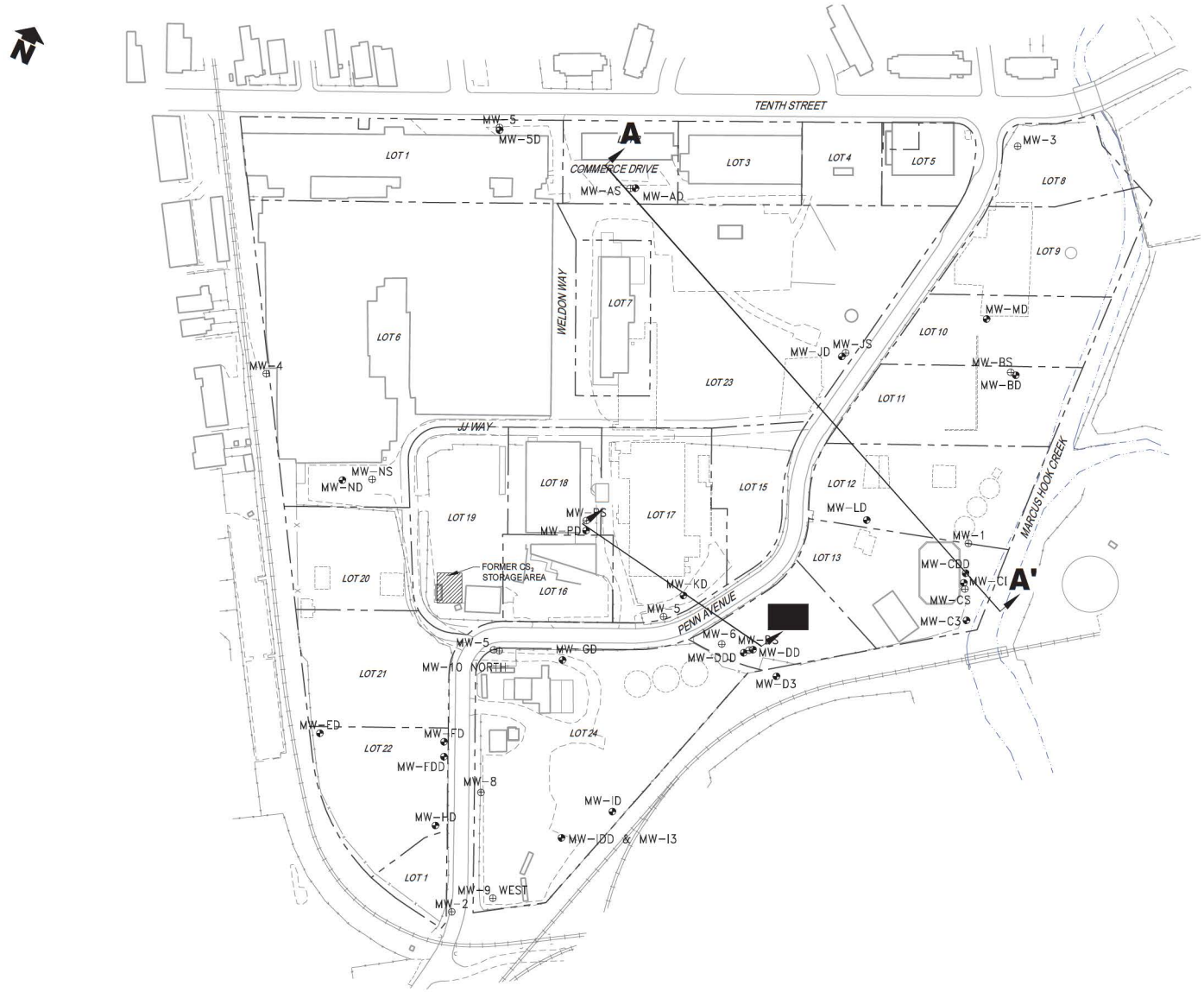
0 90 180 360
Feet

FIGURE 41
Fill Material and Potential Historical Sources
East 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-MarcusHook_MXD\Conceptual Site Models\FINAL_FEB2018\FIGURE41-FillMaterialPotentialSourceLocationPlan_20180205.mxd - steven victery - 8/20/2018

FIGURE 42
VOC IN GROUNDATER
CROSS SECTION PLAN
EAST 10th STREET
MARCUS HOOK, PENNSYLVANIA



LEGEND

- PROPERTY BOUNDARY
- CREEK
- FOUNDATION
- FENCE
- RAILROAD
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL

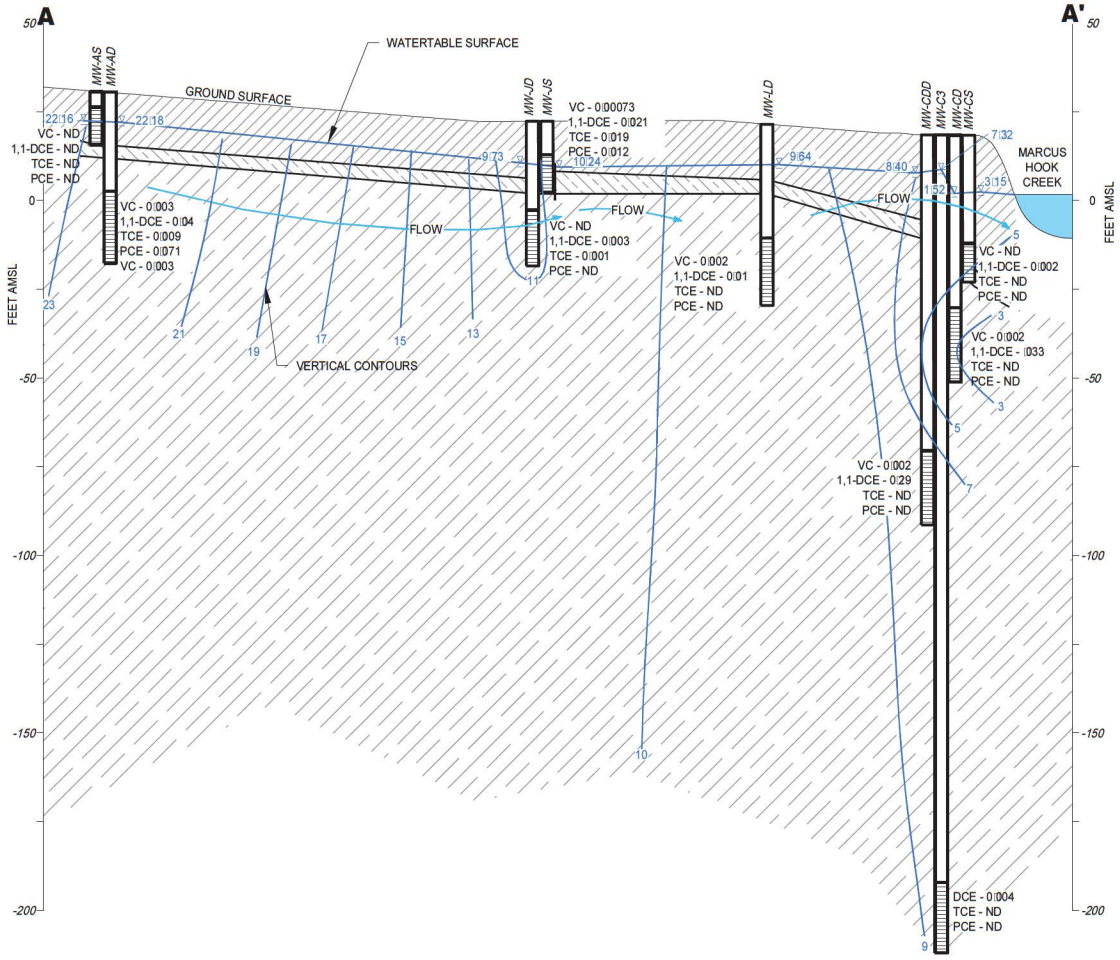
200 100 0 200
SCALE IN FEET

ERM

Q:\Team\DMMV\CAD\Drawings\FMC_Marcus Hook\0427248\A200.dwg

PLS/4-2017

FIGURE 43
VOC IN GROUNDATER
CROSS SECTION A-A'
EAST 10th STREET
MARCUS HOOK, PENNSYLVANIA



LEGEND

- MONITORING WELL WITH SCREEN
- OVERBURDEN
- WEATHERED BEDROCK
- BEDROCK-SCHIST
- TOP OF WATER TABLE GROUNDWATER ELEVATION-FT MSL
- 7.59 — GROUNDWATER ELEVATION -FT MSL
- 0.24 — TCE ORGANIC REGULATED SUBSTANCE CONCENTRATION (mg/L) (RESULTS SHOWN ARE MOST RECENT AVAILABLE)
- CASING
- GROUNDWATER ELEVATION CONTOUR

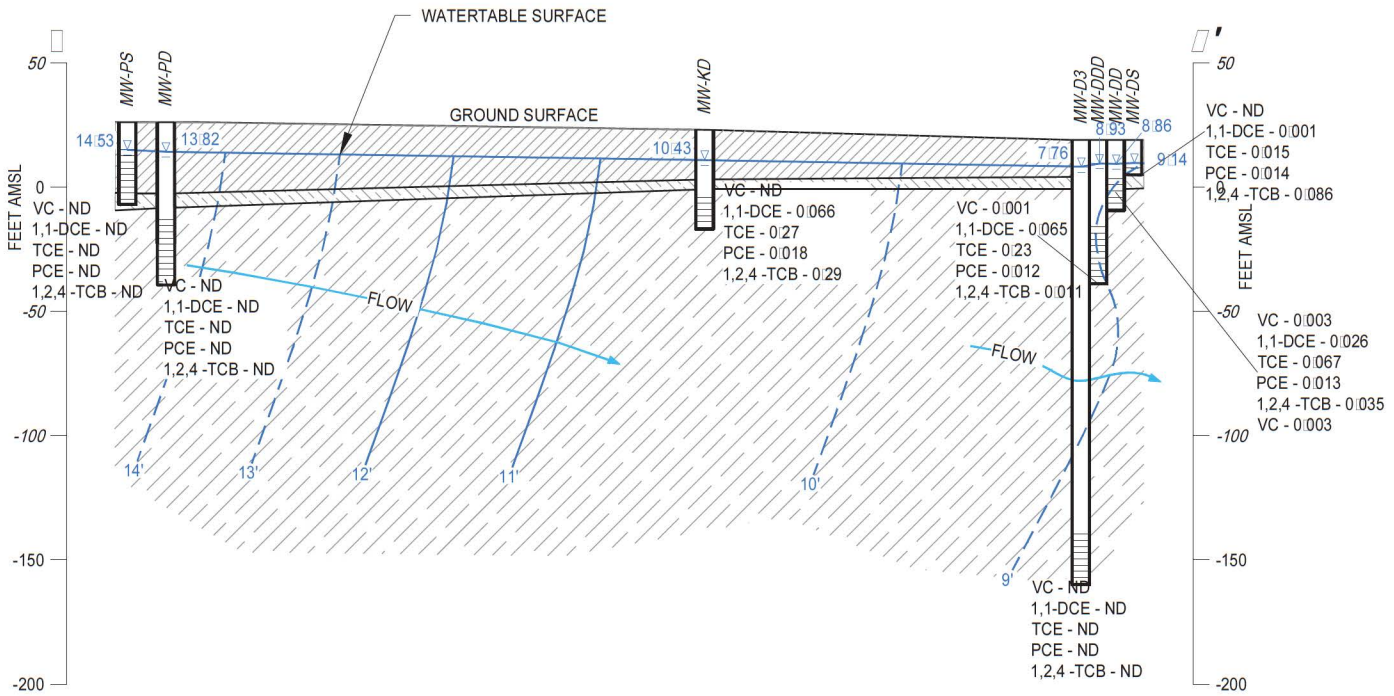
140 70 0 140
SCALE IN FEET

ERM

Q:\Team\DMMV\CAD\Drawings\FMC_Marcus Hook\(249580)\A208.dwg

PLS/4-2017

FIGURE 44
VOCs IN GROUNDWATER
CROSS SECTION B-B'
EAST 10th STREET
MARCUS HOOK, PENNSYLVANIA



LEGEND

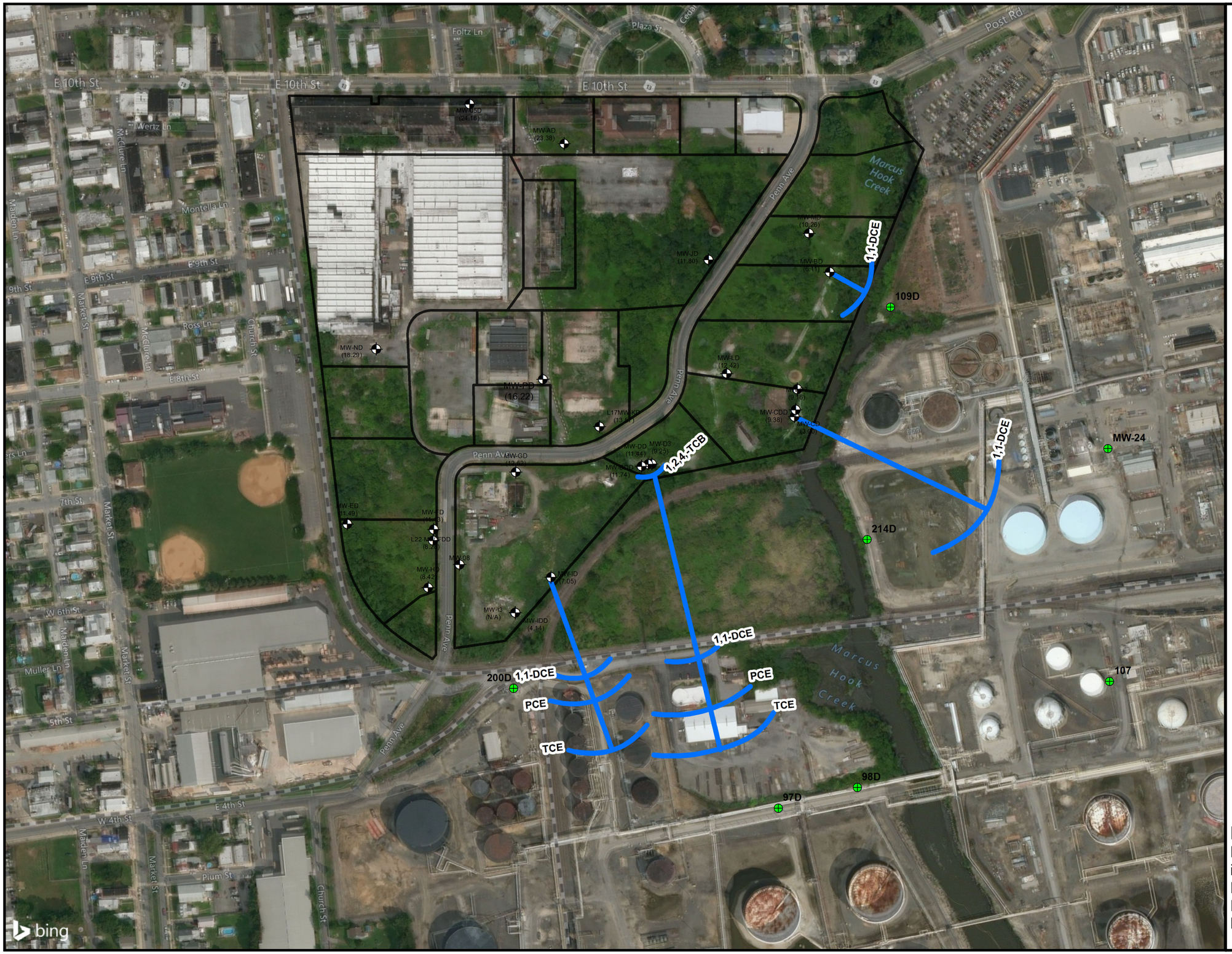
- MONITORING WELL WITH SCREEN
- OVERBURDEN
- WEATHERED BEDROCK
- BEDROCK-SCHIST
- TOP OF WATER TABLE GROUNDWATER ELEVATION-FT MSL
- 10.93 — GROUNDWATER ELEVATION -FT MSL
- 0.24 — TCE ORGANIC REGULATED SUBSTANCE CONCENTRATION (mg/L) (RESULTS SHOWN ARE MOST RECENT AVAILABLE)
- CASING
- GROUNDWATER ELEVATION CONTOUR

50 25 0 50
SCALE IN FEET

ERM

Q:\Team\DMMV\CAD\Drawings\FMC_Marcus Hook\0249580\A208.dwg

PLS/4-2017



Legend

- Bedrock Monitoring Well
- Off-Site Well Locations
- Predicted Extent of Indicated VOC Above Groundwater MSC
- Parcel Boundaries

Notes:
1. Predicted extent of VOCs derived from Quick-Domenico modeling using site-specific hydrogeologic data including hydraulic conductivity and measured gradient information.

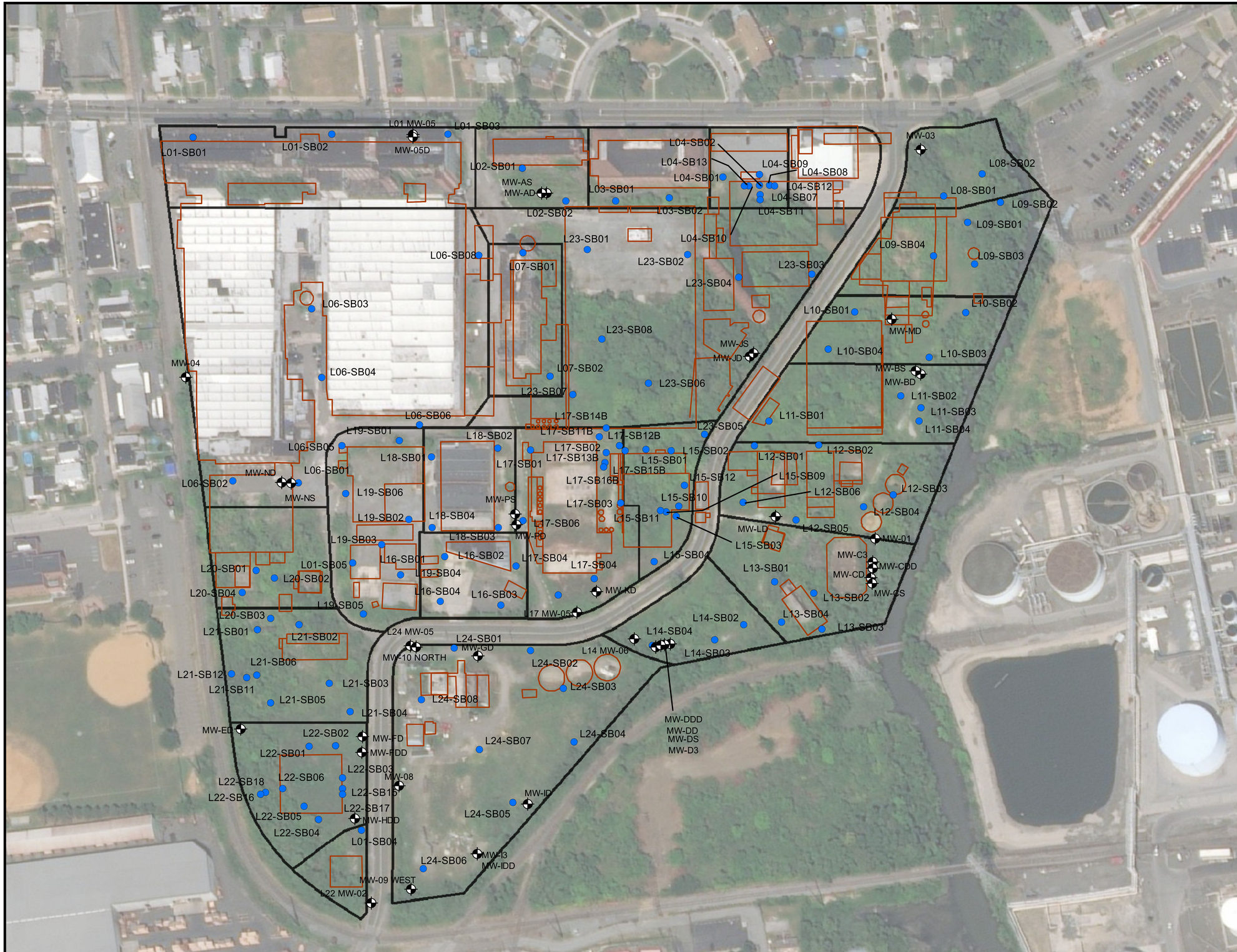
0 125 250 500
Feet

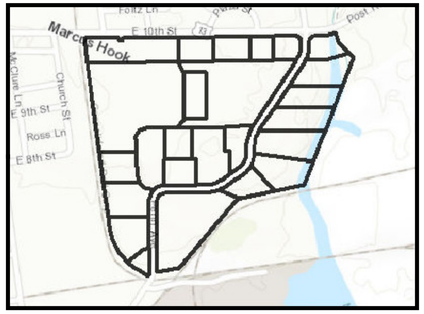
FIGURE 45
Projected Extent of VOCs Exceeding MSCs in Groundwater
East 10th Street Site
FMC Corporation
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-MarcusHook_MXD\Conceptual Site Model\FINAL_FEB2018\REVISED_20180723\FIGURE45-Extent_VOCs_Exceeding_Groundwater_20171221.mxd - steven.vickery - 8/10/2018

Plates





Legend

- Monitoring Well
- Soil Boring Location
- Historical Building/Feature
- Parcel Boundary

N

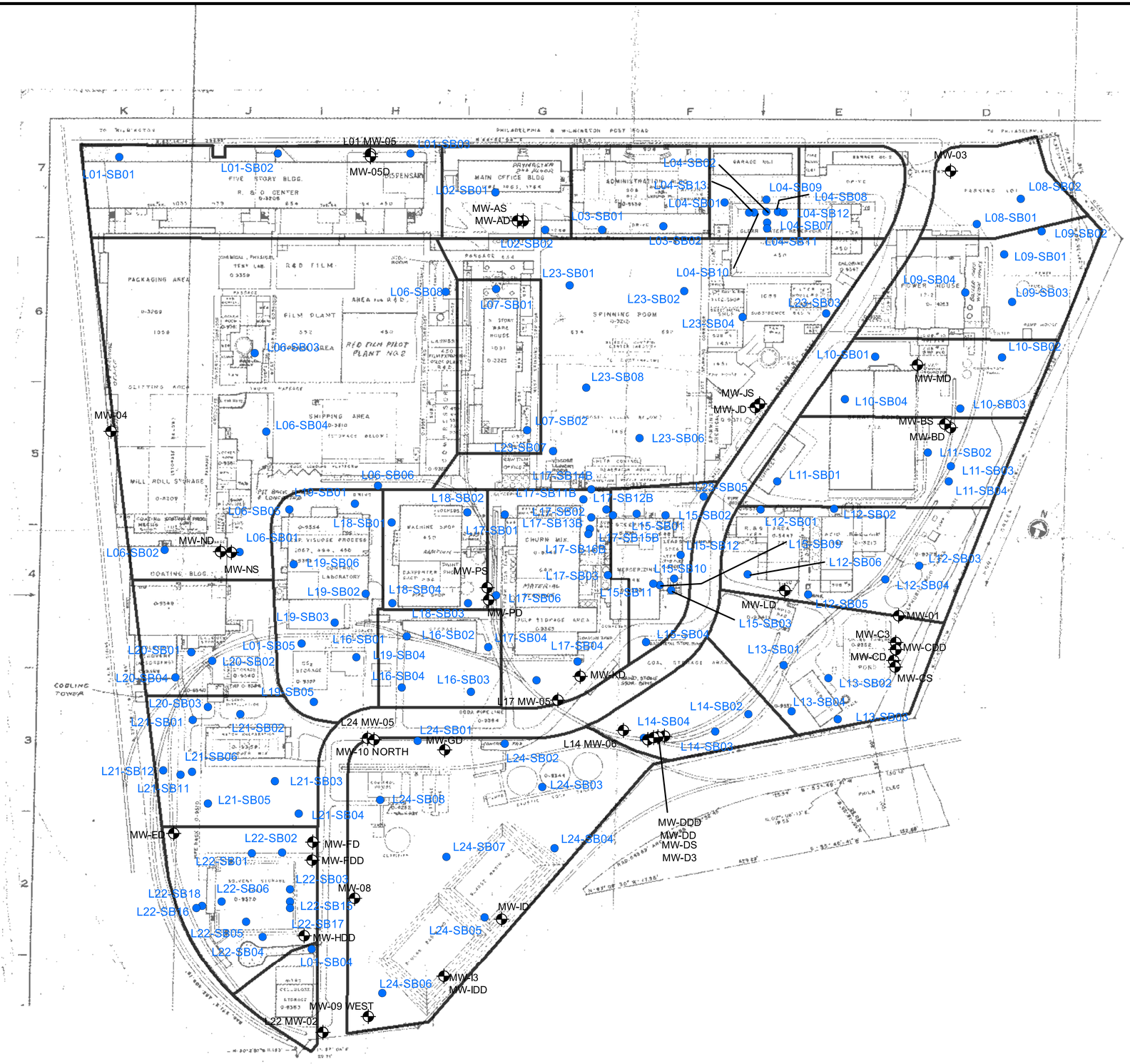
0 90 180 360
Feet

PLATE 1

2015-2017 Comprehensive Soil Investigation
Soil Boring Location Plan
E. 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\PMC-MarcusHook_MXD\Conceptual Site Model\FINAL_FEB2018\PLATE-1-SoilBoringComprehensiveLocs_HistoricFootprint.mxd - steven.vickery - 2/8/2018



Legend

- Monitoring Well
- Soil Boring Location
- Parcel Boundary

N

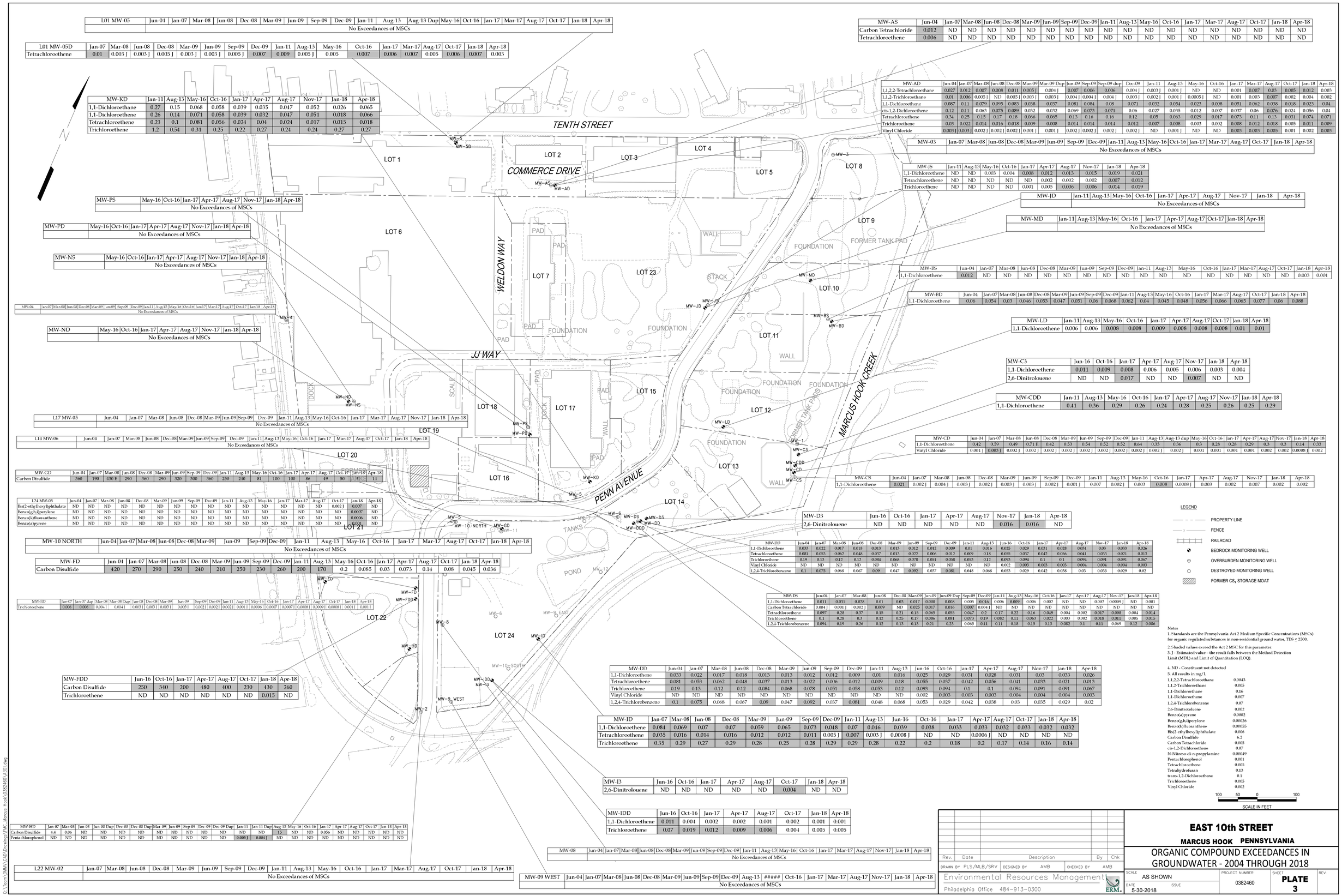
0 90 180 360
Feet

PLATE 2

2015-2017 Soil Boring, Monitoring Well and Historical Building Location Plan
E. 10th Street Site
Marcus Hook, Pennsylvania

ERM

J:\Projects\FMC-MarcusHook_MXD\Lot Exceedance Figures\FINAL_FEB2018\PLATE2-SoilBoring_MonitorWell_HistoricFootprint.mxd - steven.vickery - 2/8/2018



L01 MW-05	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	Aug-13 Dup	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
	No Exceedances of MSCs																			

L01 MW-05D	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Tetrachloroethene	0.01	0.003 J	0.003 J	0.005 J	0.003 J	0.003 J	0.005 J	0.007	0.009	0.005 J	0.005	0.007	0.006	0.007	0.005	0.006	0.007	0.003

MW-KD	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
1,1-Dichloroethane	0.27	0.15	0.068	0.058	0.039	0.035	0.047	0.052	0.026	0.065
1,1-Dichloroethene	0.26	0.14	0.071	0.058	0.039	0.032	0.047	0.051	0.018	0.066
Tetrachloroethene	0.23	0.1	0.081	0.056	0.024	0.04	0.024	0.017	0.015	0.018
Trichloroethene	1.2	0.54	0.31	0.25	0.22	0.27	0.24	0.24	0.27	0.27

MW-AS	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Carbon Tetrachloride	0.012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-AD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Mar-09 Dup	Jun-09	Sep-09	Sep-09 dup	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
1,1,2,2-Tetrachloroethane	0.027	0.012	0.007	0.008	0.011	0.005 J	0.004 J	0.007	0.006	0.006	0.004 J	0.003 J	0.001 J	ND	ND	0.001	0.007	0.03	0.005	0.012	0.003
1,1,2-Trichloroethane	0.01	0.006	0.005 J	ND	0.005 J	0.003 J	0.003 J	0.004 J	0.004 J	0.004 J	0.003 J	0.002 J	0.001 J	0.0005 J	ND	0.001	0.003	0.007	0.002	0.004	0.002
1,1-Dichloroethene	0.087	0.11	0.079	0.095	0.083	0.038	0.037	0.081	0.084	0.08	0.071	0.032	0.054	0.023	0.008	0.051	0.062	0.038	0.018	0.023	0.01
cis-1,2-Dichloroethene	0.12	0.11	0.063	0.075	0.089	0.032	0.032	0.069	0.073	0.071	0.06	0.027	0.035	0.012	0.007	0.037	0.06	0.076	0.024	0.056	0.04
Tetrachloroethene	0.34	0.25	0.15	0.17	0.18	0.066	0.065	0.13	0.16	0.16	0.12	0.05	0.063	0.029	0.017	0.073	0.11	0.13	0.031	0.074	0.071
Trichloroethene	0.03	0.022	0.014	0.016	0.018	0.009	0.008	0.014	0.014	0.014	0.012	0.007	0.008	0.003	0.002	0.008	0.012	0.018	0.005	0.011	0.009
Vinyl Chloride	0.003 J	0.003 J	0.002 J	0.002 J	0.002 J	0.001 J	0.001 J	0.002 J	0.002 J	0.002 J	0.002 J	ND	0.001 J	ND	ND	0.003	0.003	0.005	0.001	0.002	0.003

MW-03	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
	No Exceedances of MSCs																	

MW-JS	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
1,1-Dichloroethene	ND	ND	0.003	0.004	0.008	0.012	0.013	0.015	0.019	0.021
Tetrachloroethene	ND	ND	ND	ND	ND	0.002	0.002	0.002	0.007	0.012
Trichloroethene	ND	ND	ND	ND	0.001	0.005	0.006	0.006	0.014	0.019

MW-JD	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
	No Exceedances of MSCs									

MW-MD	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
	No Exceedances of MSCs									

MW-PS	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
	No Exceedances of MSCs							

MW-PD	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
	No Exceedances of MSCs							

MW-NS	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
	No Exceedances of MSCs							

MW-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
	No Exceedances of MSCs																	

MW-ND	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
	No Exceedances of MSCs							

MW-BS	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
1,1-Dichloroethene	0.012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003	0.001

MW-BD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
1,1-Dichloroethene	0.06	0.054	0.03	0.046	0.053	0.047	0.051	0.06	0.068	0.062	0.04	0.045	0.048	0.056	0.066	0.065	0.077	0.06	0.088

MW-LD	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
1,1-Dichloroethene	0.006	0.006	0.008	0.008	0.009	0.008	0.008	0.008	0.01	0.01

MW-C3	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
1,1-Dichloroethene	0.011	0.009	0.008	0.006	0.005	0.006	0.003	0.004
2,6-Dinitrotoluene	ND	ND	0.017	ND	ND	0.007	ND	ND

MW-CDD	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
1,1-Dichloroethene	0.41	0.36	0.29	0.26	0.24	0.28	0.25	0.26	0.25	0.29

L17 MW-05	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Nov-17	Jan-18	Apr-18
	No Exceedances of MSCs																		

L14 MW-06	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
	No Exceedances of MSCs																		

MW-CD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	Aug-13 dup	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
1,1-Dichloroethene	0.42	0.59	0.49	0.71 E	0.42	0.53	0.54	0.52	0.52	0.64	0.33	0.36	0.3	0.28	0.28	0.29	0.3	0.3	0.14	0.33
Vinyl Chloride	0.001 J	0.003 J	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J	0.001	0.001	0.001	0.001	0.002	0.002	0.0008 J	0.002

MW-CS	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
1,1-Dichloroethene	0.021	0.002 J	0.004 J	0.003 J	0.002 J	0.003 J	0.003 J	0.002 J	0.001 J	0.007	0.002 J	0.003	0.008	0.0008 J	0.003	0.002	0.007	0.002	0.002

MW-GD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Carbon Disulfide	360	190	430 E	290	360	290	320	300	360	250	240	81	100	100	86	49	50	14	14

L24 MW-05	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Bis(2-ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002 J	0.007	ND
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0007	ND
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0006	ND
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.001	ND

MW-D3	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	0.016	0.016	ND

MW-10 NORTH	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
	No Exceedances of MSCs																		

MW-FD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Carbon Disulfide	420	270	290	250	240	210	250	230	260	200	170	0.2	0.085	0.03	0.073	0.14	0.08	0.045	0.036

MW-DD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
1,1-Dichloroethene	0.033	0.022	0.017	0.018	0.013	0.013	0.012	0.012	0.009	0.01	0.016	0.025	0.029	0.031	0.028	0.031	0.03	0.033	0.026
Tetrachloroethene	0.081	0.053	0.062	0.048	0.037	0.013	0.022	0.006	0.012	0.009	0.18	0.055	0.037	0.042	0.056	0.041	0.033	0.021	0.013
Trichloroethene	0.19	0.13	0.12	0.12	0.084	0.068	0.078	0.051	0.058	0.053	0.12	0.093	0.094	0.1	0.1	0.094	0.091	0.091	0.067
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.005	0.003	0.003	0.004	0.004	0.004	0.003
1,2,4-Trichlorobenzene	0.1	0.075	0.068	0.067	0.09	0.047	0.092	0.037	0.081	0.048	0.068	0.053	0.029	0.042	0.038	0.03	0.035	0.029	0.02

MW-ED	Jan-07	Jan-07 dup	Mar-08	Mar-08 Dup	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Trichloroethene	0.006	0.006	0.004 J	0.0041	0.0051	0.005 J	0.005 J	0.005 J	0.002 J	0.002 J	0.002 J	0.001 J	0.0006 J	0.0007 J	0.0007 J	0.0008 J	0.0009 J	0.0008 J	0.001 J	0.001 J

MW-DS	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Jun-09 Dup	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
1,1-Dichloroethene	0.011	0.031	0.028	0.01	0.03	0.017	0.008	0.008	0.005	0.0016	0.006	0.009	0.006	0.002	ND	ND	0.002	0.0009 J	ND	0.001
Tetrachloroethene	0.094	0.028	0.37	0.15	0.21	0.15	0.065	0.055	0.047	0.2	0.17	0.22	0.16	0.049	0.004	0.002	0.017	0.008	0.004	0.014
Trichloroethene	0.1	0.28	0.3	0.12	0.25	0.17	0.086	0.081	0.073	0.19	0.082	0.11	0.063	0.022	0.003	0.002	0.018	0.011	0.005	0.015
1,2,4-Trichlorobenzene	0.094	0.19	0.26	0.12	0.13	0.13	0.21	0.23	0.065	0.11	0.11	0.18	0.15	0.13	0.082	0.1	0.11	0.069	0.12	0.086

MW-FDD	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Carbon Disulfide	250	340	200	480	400	230	430	260
Trichloroethene	ND	ND	ND	ND	ND	ND	0.015	ND

MW-DD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
1,1-Dichloroethene	0.033	0.022	0.017	0.018	0.013	0.013	0.012	0.012	0.009	0.01	0.016	0.025	0.029	0.031	0.028	0.031	0.03	0.033	0.026
Tetrachloroethene	0.081	0.053	0.062	0.048	0.037	0.013	0.022	0.006	0.012	0.009	0.18	0.055	0.037	0.042	0.056	0.041	0.033	0.021	0.013
Trichloroethene	0.19	0.13	0.12	0.12	0.084	0.068	0.078	0.051	0.058	0.053	0.12	0.093	0.094	0.1	0.1	0.094	0.091	0.091	0.067
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.003	0.003	0.003	0.004	0.004	0.004	0.003
1,2,4-Trichlorobenzene	0.1	0.075	0.068	0.067	0.09	0.047	0.092	0.037	0.081	0.048	0.068	0.053	0.029	0.042	0.038	0.03	0.035	0.029	0.02

MW-ID	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
1,1-Dichloroethene	0.084	0.069	0.07	0.07	0.059	0.065	0.073	0.048	0.07	0.046	0.039	0.038	0.033	0.033	0.032	0.033	0.032	0.032
Tetrachloroethene	0.035	0.016	0.014	0.016	0.012	0.012	0.011	0.005 J	0.007	0.003 J	0.0008 J	ND	ND	0.0006 J	ND	ND	ND	ND
Trichloroethene	0.35	0.29	0.27	0.29	0.28	0.25	0.28	0.29	0.29	0.28	0.22	0.2	0.18	0.2	0.17	0.14	0.16	0.14

MW-I3	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	0.004	ND	ND

MW-IDD	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
1,1-Dichloroethene	0.011	0.004	0.002	0.002	0.001	0.002	0.001	0.001
Trichloroethene	0.07	0.019	0.012	0.009	0.006	0.004	0.005	0.005

MW-HD	Jan-07	Mar-08	Jun-08	Jun-08 Dup	Dec-08	Dec-08 Dup	Mar-09	Jun-09	Sep-09	Dec-09	Dec-09 Dup	Jan-11	Jan-11 Dup	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Carbon Disulfide	4.4	0.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	0.056	ND	ND	ND	ND	ND
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005 J	0.004 J	ND	ND	ND	ND	ND	ND	ND	ND	ND

L22 MW-02	Jun-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
	No Exceedances of MSCs																	

MW-08	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Nov-17	Jan-18	Apr-18
	No Exceedances of MSCs																		

MW-09 WEST	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Aug-13	#####	Oct-16	Jan-17	Mar-17	Aug-17	Nov-17	Jan-18	Apr-18
	No Exceedances of MSCs																	

LEGEND

- PROPERTY LINE
- FENCE
- RAILROAD
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- DESTROYED MONITORING WELL
- FORMER CS_2 STORAGE MOAT

Notes

1. Standards are the Pennsylvania Act 2 Medium Specific Concentrations (MSCs) for organic regulated substances in non-residential ground water, TDS < 2500.

2. Shaded values exceed the Act 2 MSC for this parameter.

3. J - Estimated value - the result falls between the Method Detection Limit (MDL) and Limit of Quantitation (LOQ).

4. ND - Constituent not detected

5. All results in mg/L

1,1,2,2-Tetrachloroethane	0.0043
1,1,2-Trichloroethane	0.005
1,1-Dichloroethane	0.16
1,1-Dichloroethene	0.007
1,2,4-Trichlorobenzene	0.07
2,6-Dinitrotoluene	0.002
Benzo(a)pyrene	0.0002
Benzo(g,h,i)perylene	0.00026
Benzo(k)fluoranthene	0.00055
Bis(2-ethylhexy l)phthalate	0.006
Carbon Disulfide	6.2
Carbon Tetrachloride	0.005
cis-1,2-Dichloroethene	0.07
N-Nitroso-di-n-propylamine	0.00049
Pentachlorophenol	0.001
Tetrachloroethene	0.005
Tetrahydrofuran	0.13
trans-1,2-Dichloroethene	0.1
Trichloroethene	0.005
Vinyl Chloride	0.002

100 50 0 100
SCALE IN FEET

Rev.	Date	Description	By	Chk

DRAWN BY PLS/MLB/SRV DESIGNED BY AMB CHECKED BY AMB

Environmental Resources Management
Philadelphia Office 484-913-0300
ERM

EAST 10th STREET

MARCUS HOOK PENNSYLVANIA

ORGANIC COMPOUND EXCEEDANCES IN GROUNDWATER - 2004 THROUGH 2018

SCALE	PROJECT NUMBER	SHEET	REV.
AS SHOWN	0382460	PLATE 3	

DATE 5-30-2018 ISSUE

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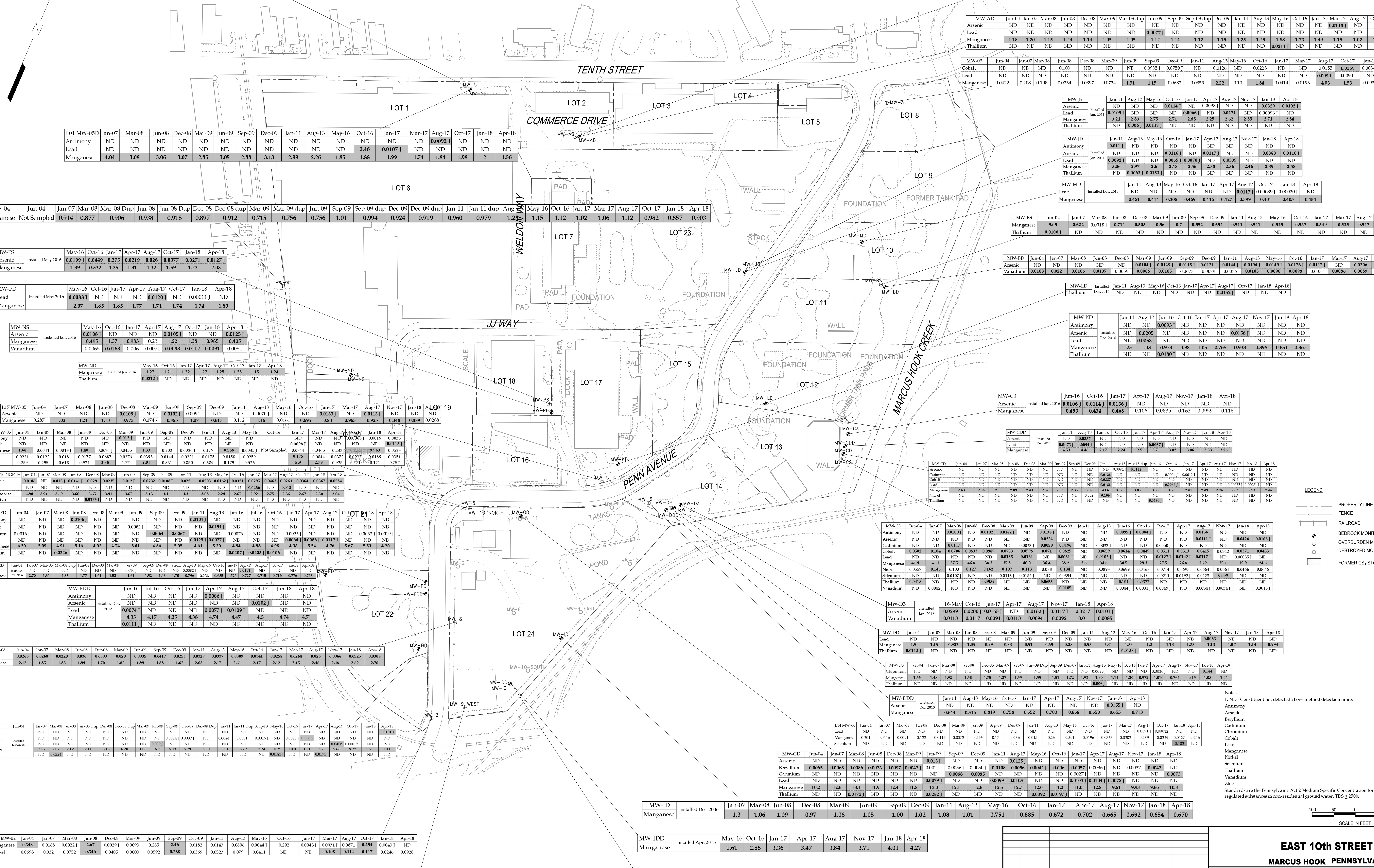

L01 MW-05	Jun-04	Jun-04 dup	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	Aug-13 dup	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Manganese	0.63	0.613	0.0153	ND	0.605	0.0023 J	0.023	0.03	0.12	0.0008	0.0082	0.1	0.1	ND	ND	0.0027 J	ND	0.0457	0.0041 J	0.0017 J	ND

MW-AS	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0126 J	ND	ND	ND	ND
Manganese	0.488	0.0029	0.0042 J	ND	0.0042 J	0.0033 J	0.0046 J	0.0011 J	0.0011 J	0.00092 J	0.0056	0.0015 J	0.0024 J	ND	0.0042 J	0.0018 J	0.0091	0.0454	0.0044 J

MW-AD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Mar-09 dup	Jun-09	Sep-09	Sep-09 dup	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0118 J	ND	ND	ND	ND
Lead	ND	ND	ND	ND	ND	ND	ND	0.0077 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	1.18	1.20	1.15	1.24	1.14	1.05	1.05	1.12	1.14	1.12	1.15	1.25	1.29	1.88	1.73	1.49	1.15	1.02	1.49	1.31	1.25
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0211 J	ND	ND	ND	ND	ND	ND	ND

MW-03	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Cobalt	ND	ND	ND	0.103	ND	ND	ND	0.0935 J	0.0759 J	ND	0.0126	ND	0.0228	ND	ND	0.0155	0.0369	0.0034 J	ND
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0090 J	0.0090 J	ND	ND
Manganese	0.0422	0.208	0.108	0.0734	0.0397	0.0734	1.51	1.15	0.0682	0.0359	2.22	0.10	1.84	0.0414	0.0193	4.03	1.53	0.0932	0.0081

MW-JS		Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Arsenic	Installed Jan. 2011	ND	ND	ND	0.0114 J	ND	0.0098 J	ND	ND	0.0329	0.0102 J
Lead		0.0109 J	ND	ND	ND	0.0066 J	ND	0.0474	ND	0.00096 J	ND
Manganese		3.21	2.83	2.75	2.71	2.85	2.25	2.62	2.85	2.71	2.84
Thallium		ND	0.006 J	0.0117 J	ND	ND	ND	ND	ND	ND	ND

MW-JD		Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Antimony	Installed Jan. 2011	0.011 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic		ND	ND	ND	0.0116 J	ND	0.0117 J	ND	ND	0.0383	0.0110 J
Lead		0.0092 J	ND	ND	0.0065 J	0.0070 J	ND	0.0539	ND	ND	ND
Manganese		3.06	2.97	2.6	2.48	2.56	2.38	2.36	2.46	2.39	2.58
Thallium		ND	0.0063 J	0.0183 J	ND	ND	ND	ND	ND	ND	ND

MW-MD		Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Lead	Installed Dec. 2010	ND	ND	ND	ND	ND	ND	0.0117 J	0.00039 J	0.00020 J	ND
Manganese		0.481	0.414	0.308	0.469	0.416	0.427	0.399	0.401	0.405	0.454

MW-BS	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Manganese	9.05	0.622	0.0018 J	0.714	0.505	0.56	0.7	0.552	0.654	0.511	0.541	0.525	0.537	0.549	0.535	0.547	0.622	2.16	1.55
Thallium	0.0106 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-BD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Arsenic	ND	ND	ND	ND	ND	0.0104 J	0.0149 J	0.0118 J	0.0121 J	0.0144 J	0.0194 J	0.0149 J	0.0176 J	0.0117 J	ND	0.0206	0.0177 J	0.0163	0.0209
Vanadium	0.0103	0.022	0.0166	0.0137	0.0059	0.0086	0.0105	0.0077	0.0079	0.0076	0.0105	0.0096	0.0098	0.0077	0.0086	0.0089	0.0074	0.0048 J	0.0049 J

MW-LD		Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Thallium	Installed Dec. 2010	ND	ND	ND	ND	ND	ND	0.0152 J	ND	ND	ND

MW-KD		Jan-11	Aug-13	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Antimony	Installed Dec. 2010	ND	ND	0.0093 J	ND	ND	ND	ND	ND	ND	ND
Arsenic		ND	0.0205	ND	ND	ND	ND	0.0156 J	ND	ND	ND
Lead		ND	0.0058 J	ND	ND	ND	ND	ND	ND	ND	ND
Manganese		1.25	1.08	0.973	0.98	1.05	0.765	0.933	0.898	0.651	0.867
Thallium		ND	ND	0.0180 J	ND	ND	ND	ND	ND	ND	ND

MW-C3		Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Arsenic	Installed Jan. 2016	0.0106 J	0.0114 J	0.0136 J	ND	ND	ND	ND	ND
Manganese		0.493	0.434	0.468	0.106	0.0835	0.163	0.0959	0.116

MW-CDD		Jan-11	Aug-13	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Arsenic	Installed Dec. 2010	ND	0.0237	ND	ND	ND	ND	ND	ND	ND	ND
Lead		0.0073 J	0.0094 J	ND	ND	ND	0.0067 J	ND	ND	ND	ND
Manganese		4.53	4.46	2.17	2.24	2.5	3.71	3.02	3.06	3.33	3.26

MW-CD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	Aug-13 dup	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0094 J	0.0132 J	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0128	ND	ND	ND	0.0024 J	0.0012 J	ND	ND	ND	ND	ND
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0887	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0188	ND	ND	ND	0.0069 J	ND	ND	ND	0.00022 J	0.00081 J	ND
Manganese	2.43	2.36	2.1	2.09	2.43	2.32	2.56	2.33	2.28	43.6	3.12	3.05	3.33	3.37	2.81	2.89	2.94	2.82	2.73	2.86
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	0.002 J	0.106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0190 J	ND	ND	ND	ND	ND	ND	ND

MW-CS	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	Jun-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Antimony	ND	ND	0.0100 J	ND	0.0102 J	0.0182 J	ND	0.0138 J	ND	ND	ND	0.0095 J	0.0084 J	ND	ND	0.0156 J	ND	ND	ND
Arsenic	ND	ND	ND	ND	ND	ND	ND	0.0224	ND	ND	ND	ND	ND	ND	ND	0.0111 J	ND	0.0426	0.0106 J
Cadmium	ND	ND	0.0117	ND	ND	ND	0.0023 J	0.0059	0.0196	ND	0.0033 J	ND	ND	0.0050 J	ND	ND	ND	ND	ND
Cobalt	0.0502	0.104	0.0706	0.0833	0.0989	0.0753	0.0798	0.071	0.0825	ND	0.0659	0.0614	0.0449	0.0511	0.0513	0.0415	0.0342	0.0371	0.0433
Lead	ND	ND	ND	ND	ND	0.0185	0.0161	ND	0.0081 J	ND	0.0102 J	ND	ND	0.0127 J	0.0142 J	0.0117 J	ND	0.00035 J	ND
Manganese	41.9	41.1	37.5	46.8	38.3	37.8	40.0	36.4	38.2	2.6	34.6	30.5	29.3	27.5	26.8	26.2	25.1	19.9	24.6
Nickel	0.0557	0.146	0.100	0.127	0.162	0.107	0.113	0.088	0.134	ND	0.0893	0.0699	0.0468	0.0714	0.0697	0.0664	0.0664	0.0466	0.0646
Selenium	ND	ND	0.0107 J	ND	ND	0.0113 J	0.0152 J	ND	0.0394	ND	ND	ND	ND	0.0211	0.0492 J	0.0223	0.059	ND	ND
Thallium	0.0418	ND	ND	ND	0.0989	ND	ND	0.0655	ND	ND	ND	0.104	0.0377	ND	ND	ND	ND	ND	ND
Vanadium	ND	0.0042 J	ND	ND	ND	ND	ND	ND	0.0105	ND	ND	0.0044 J	0.0031 J	0.0049 J	ND	0.0034 J	0.0034 J	ND	0.0018 J

MW-D3		16-May	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Arsenic	Installed Jan. 2016	0.0299	0.0200 J	0.0165 J	ND	0.0162 J	0.0117 J	0.0217	0.0101 J
Vanadium		0.0113	0.0117	0.0094	0.0113	0.0094	0.0092	0.01	0.0085

MW-DD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0063 J	ND	ND	ND
Manganese	1.5	1.15	0.982	1.05	0.99	0.83	0.91	0.89	0.88	0.93	2.31	1.33	1.3	1.13	1.23	1.13	1.07	1.14	0.994
Thallium	0.0113 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0138 J	ND	ND	ND	ND	ND	ND	ND

MW-DS	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Jun-09 Dup	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0025 J	ND	ND	ND	0.0020 J	ND	ND	0.144	ND
Manganese	1.56	1.48	1.92	1.58	1.75	1.27	1.55	1.55	1.51	1.72	1.93	1.90	1.14	1.20	0.972	1.010	0.764	0.915	1.08	1.04
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.006 J	ND	ND	ND	ND	ND	ND	ND	ND

MW-DDD		Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Arsenic	Installed Dec. 2010	ND	ND	ND	ND	ND	ND	ND	ND	0.0155 J	ND
Manganese		0.644	0.516	0.819	0.758	0.652	0.703	0.668	0.650	0.655	0.713

L14 MW-06	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0091 J	0.00012 J	ND	ND
Manganese	0.201	0.0116	0.0091	0.122	0.0115	0.0073	0.0556	0.17	0.0236	0.015	0.26	0.301	0.0196	0.0363	0.0302	0.239	0.0329	0.0127	0.0216
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.103	ND

MW-GD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Arsenic	ND	ND	ND	ND	ND	ND	0.013 J	ND	ND	ND	0.0125 J	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	0.0065	0.0068	0.0086	0.0073	0.0097	0.0047 J	0.0024 J	0.0036 J	0.0030 J	0.0108	0.0056	0.0042 J	0.006	0.0057	0.0036 J	ND	0.0037 J	0.0042	ND
Cadmium	ND	ND	ND	ND	ND	ND	ND	0.0068	0.0085	ND	ND	ND	ND	0.0027 J	ND	ND	ND	ND	0.0073
Lead	ND	ND	ND	ND	ND	ND	0.0079 J	ND	ND	0.0099 J	0.0105 J	ND	ND	0.0103 J	0.0104 J	0.0078 J	ND	ND	ND
Manganese	10.2	12.6	13.1	11.9	12.4	11.8	13.0	12.1	12.6	12.5	12.7	12.0	11.2	11.0	12.8	9.61	9.93	9.66	10.3
Thallium	ND	ND	0.0172 J	ND	ND	ND	0.0282 J	ND	ND	ND	ND	0.0392	0.0197 J	ND	ND	ND	ND	ND	ND

MW-ID		Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Manganese	Installed Dec. 2006	1.3	1.06	1.09	0.97	1.08	1.05	1.00	1.02	1.08	1.01	0.751	0.685	0.672	0.702	0.665	0.692	0.654	0.670

MW-IDD		May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Manganese	Installed Apr. 2016	1.61	2.88	3.36	3.47	3.84	3.71	4.01	4.27

MW-I3		May-16	Oct-16	Jan-17	Apr-17	Aug-17	Nov-17	Jan-18	Apr-18
Manganese	Installed Apr. 2016	0.319	0.202	0.0426	0.0867	0.108	0.146	0.126	0.141

L01 MW-05D	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0092 J	ND	ND	ND
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.46	0.0107 J	ND	ND	ND	ND	ND
Manganese	4.04	3.08	3.06	3.07	2.85	3.05	2.88	3.13	2.99	2.26	1.85	1.88	1.99	1.74	1.84	1.98	2	1.56

MW-04	Jun-04	Jan-07	Mar-08	Mar-08 Dup	Jun-08	Jun-08 Dup	Dec-08	Dec-08 dup	Mar-09	Mar-09 dup	Jun-09	Sep-09	Sep-09 dup	Dec-09	Dec-09 dup	Jan-11	Jan-11 dup	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Manganese	Not Sampled	0.914	0.877	0.906	0.938	0.918	0.897	0.912	0.715	0.756	0.756	1.01	0.994	0.924	0.919	0.960	0.979	1.25	1.15	1.12	1.02	1.06	1.12	0.982	0.857	0.903

MW-PS		May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Arsenic	Installed May 2016	0.0199 J	0.0449	0.275	0.0219	0.026	0.0377	0.0271	0.0127 J
Manganese		1.39	0.532	1.35	1.31	1.32	1.59	1.23	2.08

MW-PD		May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Lead	Installed May 2016	0.0088 J	ND	ND	ND	0.0120 J	ND	0.00011 J	ND
Manganese		2.07	1.85	1.85	1.77	1.71	1.74	1.74	1.80

MW-NS		May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Arsenic	Installed Jan. 2016	0.0108 J	ND	ND	ND	0.0105 J	ND	ND	0.0125 J
Manganese		0.495	1.37	0.983	0.23	1.22	1.38	0.985	0.405
Vanadium		0.0065	0.0163	0.006	0.0071	0.0083	0.0112	0.0091	0.0051

MW-ND		May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Manganese	Installed Jan. 2016	1.27	1.21	1.32	1.27	1.25	1.25	1.15	1.24
Thallium		0.0212 J	ND	ND	ND	ND	ND	ND	ND

L17 MW-05	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Nov-17	Jan-18	Apr-18
Arsenic	ND	ND	ND	ND	0.0109 J	ND	0.0102 J	0.0094 J	ND	ND	0.0070 J	ND	ND	0.0133 J	ND	0.0113 J	ND	ND	ND
Manganese	0.287	1.03	1.21	1.13	0.973	0.0746	0.885	1.07	0.617	0.112	1.15	0.0161	0.695	0.83	0.963	0.925	0.348	0.889	0.0288

L24 MW-05	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Antimony	ND	ND	ND	ND	ND	0.012 J	ND	ND	ND	ND	ND	ND	Not Sampled	ND	ND	ND	0.00065 J	0.0019	0.0033
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		0.0098 J	ND	ND	ND	ND	0.0113 J
Manganese	1.68	0.0041	0.0018 J	1.40	0.0031 J	0.0455	1.33	0.202	0.0026 J	0.177	0.568	0.0035 J		0.0844	0.0465	0.233	0.733	0.763	0.0523
Nickel	0.0221	0.0122	0.018	0.0177	0.0687	0.0276	0.0393	0.0144	0.0221	0.0175	0.0158	0.0259		0.175	0.0844	0.0372	0.0237	0.0189	0.0351
Zinc	0.259	0.295	0.618	0.934	3.38	1.77	2.01	0.831	0.850	0.689	0.479	0.526		5.9	2.79	0.925	0.471	0.121	0.757

MW-10 NORTH	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Arsenic	0.0106	ND	0.015 J	0.0141 J	0.029	0.0235	0.012 J	0.0232	0.0108 J	0.022	0.0203	0.0162 J	0.0321	0.0295	0.0463	0.0263	0.0364	0.0367	0.0284
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0286	ND	0.018	ND	ND	ND
Manganese	4.90	3.91	3.69	3.60	3.65	3.91	3.67	3.13	3.1	3.3	3.08	2.24	2.67	2.92	2.75	2.36	2.67	2.50	2.04
Thallium	ND	ND	ND	ND	0.0178 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-FD	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	Jun-16	Jul-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Antimony	ND	ND	ND	0.0106 J	ND	ND	ND	ND	ND	0.0104 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	ND	ND	ND	ND	ND	ND	0.0082 J	ND	ND	ND	0.0154 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.0016 J	ND	ND	ND	ND	ND	ND	0.0064	0.0067	ND	ND	0.00076 J	ND	ND	0.0025 J	ND	ND	ND	0.0033 J	0.0019 J
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0125 J	0.0077 J	ND	ND	ND	0.0064 J	0.0086 J	0.0117 J	ND	ND	ND
Manganese	6.20	5.09	4.91	5.16	4.93	4.74	5.01	4.66	5.05	4.61	5.30	4.94	4.98	4.98	4.38	5.54	4.76	5.67	5.53	4.20
Thallium	ND	ND	0.0226	ND	ND	ND	ND	ND	ND	ND	ND	0.0207 J	0.0203 J	0.0106 J	ND	ND	ND	ND	ND	ND

MW-ED	Jun-04	Jan-07	Mar-08	Mar-08 Dup	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Arsenic	Installed Dec. 2006	ND	ND	ND	ND	ND	ND	0.010 J	ND	ND	ND	0.0082 J	ND	ND	ND	0.0131 J	ND	ND	ND	ND
Manganese		2.70	1.81	1.85	1.77	1.61	1.52	1.61	1.52	1.48	1.70	0.796	0.238	0.635	0.726	0.727	0.715	0.716	0.776	0.748

MW-FDD		Jun-16	Jul-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Antimony	Installed Dec. 2015	ND	ND	ND	ND	0.0086 J	ND	ND	ND	ND
Arsenic		ND	ND	ND	ND	ND	ND	0.0102 J	ND	ND
Lead		0.0074 J	ND	ND	ND	0.0077 J	0.0109 J	ND	ND	ND
Manganese		4.35	4.17	4.35	4.38	4.74	4.47	4.5	4.74	4.71
Thallium		0.0111 J	ND	ND	ND	ND	ND	ND	ND	ND

MW-08	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Nov-17	Jan-18	Apr-18
Arsenic	0.0266	0.0268	0.0220	0.030	0.0333	0.020	0.0335	0.0417	0.0253	0.0327	0.0337	0.0309	0.0341	0.0258	0.0264	0.026	0.0366	0.0525	0.0308
Manganese	2.12	1.85	1.85	1.99	1.70	1.83	1.99	1.88	1.62	2.03	2.17	2.61	2.47	2.12	2.15	2.46	2.48	2.62	2.76

MW-HD	Jun-04	Jan-07	Mar-08	Jun-08	Jun-08 Dup	Dec-08	Dec-08 Dup	Mar-09	Jun-09	Sep-09	Dec-09	Dec-09 Dup	Jan-11	Jan-11 Dup	Aug-13	May-16	Oct-16	Jan-17	Apr-17	Aug-17	Oct-17	Jan-18	Apr-18
Arsenic	Installed Dec. 2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0101 J
Cadmium		ND	ND	ND	ND	ND	ND	ND	ND	0.0024 J	0.0037 J	ND	0.0024 J	0.0031 J	0.0016 J	ND	0.0028 J	0.0066	ND	ND	ND	ND	ND
Lead		ND	ND	ND	ND	ND	ND	ND	0.009 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0406	0.00012 J	ND	ND
Manganese		9.85	7.07	7.12	7.11	6.15	6.28	1.08	6.7	6.09	5.79	6.00	6.21	6.29	7.24	10.2	10.0	10.1	9.8	9.68	9.72	9.75	10.1
Thallium		ND	0.0224	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0181 J	ND	ND	0.0171 J	ND	ND	ND	ND

L22 MW-02	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Oct-17	Jan-18	Apr-18
Manganese	0.348	0.0188	0.0022 J	2.67	0.0029 J	0.0093	0.285	2.46	0.0182	0.0143	0.0806	0.0044 J	0.292	0.0043 J	0.0031 J	0.0871	0.454	0.0043 J	ND
Nickel	0.0698	0.032	0.0752	0.346	0.0405	0.0603	0.0592	0.288	0.0369	0.0523	0.079	0.0411	ND	ND	0.108	0.114	0.117	0.0246	0.0928

MW-09 WEST	Jun-04	Jan-07	Mar-08	Jun-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Jan-11	Aug-13	May-16	Oct-16	Jan-17	Mar-17	Aug-17	Nov-17	Jan-18	Apr-18
Antimony	ND	0.0114 J	ND	ND	ND	ND	ND	ND	ND	Not Sampled	0.0155 J	0.0114 J	ND	0.0110 J	0.0110 J	0.0147 J	0.0063	0.0036	0.0099
Manganese	0.0775	0.0507	0.676	0.466	3.02	2.97	2.92	3.28	2.55		0.0480	0.0720	0.433	0.0833	0.0096	0.2900	0.0932	0.544	0.0184
Nickel	0.0482	0.136	0.0901	0.0754	0.128	0.0881	0.0659	0.0641	0.0407		0.0622	0.0963	0.0297	0.222	0.126	0.139	0.0475	0.0368	0.130

LEGEND

- PROPERTY LINE
- FENCE
- RAILROAD
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- DESTROYED MONITORING WELL
- FORMER CS_2 STORAGE MOAT

Notes:

1. ND - Constituent not detected above method detection limits

Antimony	0.006
Arsenic	0.01
Beryllium	0.004
Cadmium	0.005
Chromium	0.1
Cobalt	0.035
Lead	0.005
Manganese	0.3
Nickel	0.1
Selenium	0.05
Thallium	0.002
Vanadium	0.0082
Zinc	2

Standards are the Pennsylvania Act 2 Medium Specific Concentration for inorganic and regulated substances in non-residential ground water, TDS ≤ 2500.

100 50 0 100
SCALE IN FEET

Rev.	Date	Description	By	Chk

DRAWN BY PLS/MLB/SRV DESIGNED BY AMB CHECKED BY AMB

Environmental Resources Management
Philadelphia Office 484-913-0300
ERM

EAST 10th STREET

MARCUS HOOK PENNSYLVANIA

INORGANIC COMPOUND EXCEEDANCES IN GROUNDWATER - 2004 THROUGH 2018

SCALE: AS SHOWN
PROJECT NUMBER: 0382460
SHEET: PLATE 4
REV.:
DATE: 5-30-2018
ISSUE:

Q:\Team\DMMV\CAD\Drawings\FMC_Marcus Hook\0382460\A301.dwg

Tables

Table 1
Historical Site Use by Lot
East 10th Street Site
Marcus Hook, Pennsylvania

Lot	Historical FMC Use	Known and Assumed Historical FMC Chemical Storage and Use	Post-FMC Ownership Summary
1	Office Building with R&D lab and photo processing areas	Potential used oil storage on 2nd floor	1978 - purchased by Marcus Hook Development Park (MHDP); 1986 - purchased by Marcus Hook Business and Commerce Center (MHBCC); 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone Community Alliance - Marcus Hook, LP (Keystone)
2	Office Building	None noted	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
3	Office Building/Cafeteria, with laboratory space	Potential chemical storage area on 4th floor	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
4	Garage	Solvents, oils, flammable liquids, batteries. Gasoline USTs.	1978 - purchased by MHDP; 2000 - purchased by MHBCC; 2002 - purchased by Marcus Hook-Trainer Fire Department (FD)
5	Fire department	None noted	1978 - purchased by MHDP; 1988 - purchased by Vicose Fire Dept. 2002 - purchased by Marcus Hook-Trainer FD
6	Former Production Buildings 6A and 6B - dye testing, chlorine and lead storage, acid recovery, spinning rooms, pilot plant	Lubricating oils, dyes, chlorine, lead, acids, caustic soda	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2002 - purchased by Equity Brokerage
7	Former warehouse, solvent bath and acid vent	Solvents, acids	1978 - purchased by MHDP; 1987 - purchased by Kurt Scheuermann 1997 - purchased by Safety Disposal System of PA, Inc.; 2002 - purchase by Mary Jo Sanford
8	Former parking lot - filled area	None noted	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone

Table 1
Historical Site Use by Lot
East 10th Street Site
Marcus Hook, Pennsylvania

Lot	Historical FMC Use	Known and Assumed Historical FMC Chemical Storage and Use	Post-FMC Ownership Summary
9	Former power house	Coal, fuel storage	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
10	Former spray ponds/power house - filled area	Coal	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
11	Former spray ponds - filled area	None noted	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
12	Former acid reclaim operations, anhydrous caustic operations building, pilot plant, and R&D center	Acids, caustics	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
13	Former incinerator and spray pond	None noted	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
14	Former coal storage	Coal	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
15	Former Mercerizing and lead shop building	Sodium hydroxide, lead	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
16	Former paint shop	Assumed paints, pigments, solvents	1978 - purchased by MHDP; 1987 - purchased by Kurt Scheuermann 1997 - purchased by Safety Disposal System of PA, Inc.; 2002 - purchase by Mary Jo Sanford

Table 1
Historical Site Use by Lot
East 10th Street Site
Marcus Hook, Pennsylvania

Lot	Historical FMC Use	Known and Assumed Historical FMC Chemical Storage and Use	Post-FMC Ownership Summary
17	Former Churn and Mix Building	Sodium hydroxide, carbon disulfide, feedstock chemicals	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
18	Former machine shop/storage building	Assumed lubricants, oils, solvents	1978 - purchased by MHDP; 1987 - purchased by Kurt Scheuermann 1997 - purchased by Safety Disposal System of PA, Inc.; 2002 - purchase by Mary Jo Sanford
19	Former experimental process building	Carbon disulfide USTs, sulfuric acid, assumed sodium hydroxide	1978 - purchased by MHDP; 1987 - purchased by Kurt Scheuermann 1997 - purchased by Safety Disposal System of PA, Inc.; 2002 - purchase by Mary Jo Sanford
20	Former coatings building, solvent recovery operations, alcohol storage	Solvents, alcohols	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
21	Former solvent recovery facility, lacquer mix processes, alcohol and distillation units	Solvents, lacquer, alcohols	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
22	Former solvent storage tank farm, nitrocellulose storage	Toluene, ethyl alcohol, butyl alcohol, ethyl acetate, and tetrahydrofuran in 30 USTs	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
23	Former spinning room and viscose cellar, former spinning, reeling, and washing rooms, viscose and chemical storage, facility electrical controls, sheet metal shop, former fume exhaust stack	Carbon disulfide	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 2004 - purchased by Marcus Hook Developers; 2007 - transferred to Keystone
24	Former wastewater treatment plant	Wastewater, hazardous sludge, waste oil	1978 - purchased by MHDP; 1979 - purchased by IU Conversion (Envirosource); 2002 - purchased by Omega Wood Recycling, Inc.

Table 1
Historical Site Use by Lot
East 10th Street Site
Marcus Hook, Pennsylvania

Lot	Historical FMC Use	Known and Assumed Historical FMC Chemical Storage and Use	Post-FMC Ownership Summary
001 - Borough of Marcus Hook	Cellulose Storage	None noted	1978 - purchased by MHDP; 1986 - purchased by MHBCC; 1989 - purchased by Borough of Marcus Hook

Table 2
Summary of Environmental Reports
East 10th Street Site
Marcus Hook, Pennsylvania

Author	Date	Report Title	Description
A.T. Kearney, Inc.	June 17, 1987	Modified Phase I Report, prepared for the USEPA, Region III	This report is a summary of the preliminary review and visual site inspection conducted by A.T. Kearney, Inc. at Marcus Hook Processing, Inc.
NTH Consultants, Ltd.	May 15, 1990	Environmental Site Assessment for FMC Tank Farm, Marcus Hook, PA, prepared for Marcus Hook Development Authority, Marcus Hook, PA	This report is a summary of the results of an environmental site assessment at the former FMC Tank Farm.
Roy F. Weston	October 1990	Marcus Hook Business Commerce Center, Environmental Assessment, prepared for Huggler & Silvering law firm	This report summarized an investigation that included PADEP file review, observations made during a Site walk through, and a summary of operating activities that related to the use of hazardous substances and waste disposal.
Environmental Health Research and Testing, Inc.	January 1991	Preliminary Removal Assessment Report; Data Collection Summary, prepared for USEPA, Region III	This report is a summary of the results of the removal, sampling and analysis testing performed at the Site in November and December 1990.
USEPA	May 7, 1991	Resource Conservation and Recovery Act Section 3008(h) Corrective Action Consent Order	This report summarizes the findings of the NTH, Roy F. Weston and Environmental Health Research and Testing, Inc. reports.
McLaren/Hart Environmental Engineering Corp.	October 1991	RCRA Facility Investigation, Task I of V, Description of Current Conditions, prepared for USEPA	This report provided background information that would be used to develop a Resource Conservation and Recovery Act (RCRA) Facility Investigation Work Plan.
McLaren/Hart Environmental Engineering Corp.	October 1991	RCRA Facility Investigation, Task II of V, Description of Current Conditions, prepared for USEPA	This report identified potential corrective measure technologies that could be used for the containment, treatment, remediation and/or disposal of known contaminants at the Site.
NUS Corporation; Superfund Division	October 1991	Site Inspection of Marcus Hook, prepared for USEPA Hazardous Site Control Division	This report presents a summary of the results of a site assessment performed by NUS in January, 1991.
Roux Associates, Inc.	November 13, 1992	Former Tenth Street Site, Marcus Hook, Pennsylvania, Site Assessment Report, Volume I of VI	This report summarizes the findings of a Site Assessment and the findings of previous site investigations.
Roux Associates, Inc.	November 13, 1992	Former Tenth Street Site, Marcus Hook, Pennsylvania, Site Assessment Report, Volume II of VI	This report is a compilation of appendices for the Site Assessment Report Volume I of VI, November 13, 1992.
McLaren/Hart Environmental Engineering Corp.	February 1993	RCRA Facility Investigation, Task V of V, Description of Current Conditions, prepared for USEPA	This report presents an analysis and summary of the results of the RCRA Facility Investigation conducted at the Site between September 1, 1992 and February 26, 1993.
Dames & Moore	January 1996	Final Summary Report Remedial Activities, Marcus Hook Corporation, East Tenth Street, Marcus Hook, Pennsylvania, prepared for USEPA	This report serves as a documentation report for the remedial activities performed to mitigate asbestos and PCBs in buildings on Lots 1, 3, 7, 13 and 17.
McLaren/Hart Environmental Engineering Corp.	March 21, 1997	Soil Sampling Program Results, prepared for USEPA	This report presented the RCRA closure soil sampling results for Marcus Hook Processing, Inc.
Foster Wheeler Environmental Corp.	March 1999	Site Assessment Report, prepared for PADEP	This report summarizes historical data relating to environmental conditions at the Site and determined the need for additional environmental assessment.
Foster Wheeler Environmental Corp.	August 2000	Final Building Reconnaissance Report, prepared for PADEP	This report summarizes the findings of building reconnaissance that was performed to assess contamination and wastes located inside Site buildings.
Foster Wheeler Environmental Corp.	June 2002	Final Phase I Site Investigation Report, prepared for PADEP	The purpose of this report was to present the findings of the Phase I site assessment which included current environmental conditions and an evaluation of historical data at the Site.
ERM	February 2006	Interim Response Final Report, prepared for FMC Corporation	This report summarized the 2004-2005 interim response activities performed by FMC.
ERM	January 2008	Phase II Site Investigation Report, prepared for FMC Corporation	This report presents the results of the environmental investigation activities to characterize and delineate potentially affected areas identified by PADEP, including the sediments of Marcus Hook Creek, a suspected carbon disulfide (CS2) source area, and Site ground water.
ERM	April 2015	Remedial Investigation Work Plan, prepared for FMC Corporation	This report presented the scope of work and approach to more broadly characterize current Site conditions.

Table 3
Groundwater Elevation Summary Table - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Monitoring Well	Inner Casing Elevation (ft. amsl)	June 8, 2004		January 8, 2007		February 23, 2007		March 7, 2008		June 16, 2008		December 15, 2008		March 16, 2009		June 8, 2009		September 21, 2009		December 14, 2009	
		Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]
Overburden Wells																					
MW-01	20.90	12.01	8.90	10.92	9.99	12.61	8.30	11.50	9.41	12.01	8.90	12.19	8.72	13.18	7.73	NM	-	13.04	7.87	10.29	10.62
L22 MW-02	15.69	2.82	12.87	2.82	12.87	2.82	12.87	1.95	13.74	2.32	13.37	1.92	13.77	2.57	13.12	2.12	13.57	4.15	11.54	1.76	13.93
MW-03	17.14	7.78	9.36	7.78	9.36	7.78	9.36	6.80	10.34	7.85	9.29	6.01	11.13	7.82	9.32	7.14	10.00	7.80	9.34	5.37	11.77
MW-04	28.30	NA	NA	NA	NA	NA	NA	5.15	23.15	5.17	23.13	5.09	23.21	6.08	22.22	4.91	23.39	6.03	22.27	4.53	23.77
L01 MW-05	30.91	7.64	23.27	7.64	23.27	7.64	23.27	7.02	23.89	7.34	23.57	7.11	23.80	7.98	22.93	6.90	24.01	7.78	23.13	6.35	24.56
L17 MW-05	22.40	9.12	13.28	9.12	13.28	9.12	13.28	8.90	13.50	9.04	13.36	8.42	13.98	10.12	12.28	8.33	14.07	9.46	12.94	7.06	15.34
L24 MW-05	29.16	13.80	15.36	13.80	15.36	13.80	15.36	12.70	16.46	13.60	15.56	13.95	15.21	16.28	12.88	12.85	16.31	15.92	13.24	10.31	18.85
L14 MW-06	22.97	10.23	12.74	10.23	12.74	10.23	12.74	9.53	13.44	10.27	12.70	9.67	13.30	11.48	11.49	9.52	13.45	10.93	12.04	8.37	14.60
MW-07	22.07	9.94	12.13	9.94	12.13	9.94	12.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-08	23.52	5.62	17.90	5.62	17.90	5.62	17.90	5.59	17.93	5.88	17.64	6.49	17.03	7.05	16.47	5.24	18.28	6.55	16.97	4.62	18.90
MW-09 WEST	19.68	11.34	8.34	11.34	8.34	11.34	8.34	10.28	9.40	10.70	8.98	9.77	9.91	10.58	9.10	9.64	10.04	9.72	9.96	8.40	11.28
MW-10 NORTH	30.03	16.46	13.57	15.60	14.43	17.67	12.36	16.30	13.73	16.68	13.35	17.07	12.96	17.79	12.24	16.26	13.77	17.35	12.68	15.02	15.01
MW-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00	NA	NM	NA	NA	NA	NA	NA	NA	NA
MW-AS	31.50	8.56	22.94	7.29	24.21	8.63	22.87	8.20	23.30	8.49	23.01	8.07	23.43	8.87	22.63	8.24	23.26	8.74	22.76	7.45	24.05
MW-BS	21.30	14.62	6.68	12.62	8.68	13.89	7.41	13.30	8.00	14.27	7.03	12.90	8.40	14.61	6.69	14.29	7.01	14.21	7.09	12.91	8.39
MW-CS	20.13	14.69	5.44	13.77	6.36	15.00	5.13	14.28	5.85	14.58	5.55	14.43	5.70	15.88	4.25	14.55	5.58	14.61	5.52	13.94	6.19
MW-DS	21.05	9.67	11.38	8.49	12.56	10.25	10.80	9.17	11.88	9.62	11.43	9.82	11.23	10.40	10.65	9.17	11.88	9.85	11.20	7.61	13.44
MW-JS	25.14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-NS	31.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-PS	28.53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bedrock Wells																					
L01 MW-05D	30.95	NA	NA	6.87	24.08	8.12	22.83	7.20	23.75	7.52	23.43	7.18	23.77	8.21	22.74	7.00	23.95	7.90	23.05	6.43	24.52
MW-AD	31.43	8.54	22.89	7.46	23.97	8.65	22.78	8.20	23.23	8.45	22.98	8.16	23.27	8.80	22.63	8.20	23.23	8.65	22.78	7.71	23.72
MW-BD	21.24	15.15	6.11	14.58	6.68	15.45	5.81	14.83	6.43	15.22	6.04	15.49	5.77	15.87	5.39	15.20	6.06	15.74	5.52	14.28	6.98
MW-CD	19.93	17.06	2.87	17.49	2.44	18.04	1.89	16.70	3.23	17.41	2.52	17.14	2.79	18.11	1.82	17.58	2.35	17.79	2.14	15.83	4.10
MW-CDD	20.36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-C3	19.77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-DD	20.75	9.83	10.93	8.18	12.58	10.48	10.28	9.16	11.60	9.95	10.81	9.06	11.70	10.62	10.14	9.32	11.44	10.14	10.62	7.71	13.05
MW-DDD	21.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-D3	21.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-ED	25.71	NA	NA	32.74	-7.03	19.37	6.34	13.55	12.16	14.11	11.60	15.27	10.44	14.70	11.01	13.65	12.06	14.78	10.93	13.48	12.23
MW-FD	27.76	16.65	11.11	15.32	12.44	17.09	10.67	15.81	11.95	16.32	11.44	16.73	11.03	17.10	10.66	15.88	11.88	16.81	10.95	14.63	13.13
MW-FDD	28.09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-GD	27.23	14.49	12.74	13.82	13.41	15.33	11.90	14.34	12.89	14.66	12.57	14.79	12.44	15.38	11.85	14.20	13.03	15.11	12.12	13.07	14.16
MW-HD	24.84	NA	NA	15.28	9.56	16.99	7.85	16.15	8.69	16.57	8.27	16.52	8.32	17.20	7.64	16.01	8.83	16.91	7.93	15.10	9.74
MW-ID	19.42	NA	NA	10.90	8.52	12.72	6.70	11.72	7.70	12.10	7.32	11.91	7.51	12.78	6.64	11.69	7.73	12.35	7.07	10.63	8.79
MW-IDD	20.34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-I3[3]	20.41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-JD	25.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-KD	24.99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-LD	25.08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-MD	22.55	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-ND	31.90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-PD	26.86	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) ft. toc = Feet below top of inner casing
2) ft. amsl = Feet above mean sea level
3) MW-I3 was not used in the preparation of Bedrock Potiometeric Surface Maps due to extremely slow recharge

Table 3
Groundwater Elevation Summary Table - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Monitoring Well	Inner Casing Elevation (ft. amsl)	January 5, 2011		August 12, 2013		May 23, 2016		October 13, 2016		January 3, 2017		March 20, 2017		August 14, 2017		October 23, 2017		January 3, 2018		April 9, 2018	
		Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]	Depth to Water (ft below toc)[1]	Ground Water Elevation (ft amsl)[2]
Overburden Wells																					
MW-01	20.90	NS	NS	12.22	8.68	12.41	8.49	DRY	NA	DRY	NA	DRY	NA	13.79	7.11	14.80	6.10	DRY	NA	11.81	9.09
L22 MW-02	15.69	2.63	13.06	2.18	13.51	2.13	13.56	4.32	11.37	3.64	12.05	1.97	13.72	4.12	11.57	5.06	10.63	4.41	11.28	2.20	13.49
MW-03	17.14	7.72	9.42	7.77	9.37	6.64	10.50	7.86	9.28	7.25	9.89	5.90	11.24	8.09	9.05	8.59	8.55	8.30	8.84	7.16	9.98
MW-04	28.30	5.55	22.75	5.70	22.60	4.92	23.38	5.77	22.53	5.09	23.21	5.02	23.28	5.85	22.45	7.01	21.29	6.50	21.80	7.97	20.33
L01 MW-05	30.91	6.35	24.56	7.40	23.51	6.79	24.12	8.09	22.82	7.69	23.22	7.06	23.85	7.68	23.23	8.79	22.12	8.68	22.23	7.52	23.39
L17 MW-05	22.40	10.27	12.13	8.20	14.20	8.17	14.23	11.32	11.08	11.37	11.03	9.93	12.47	9.95	12.45	10.93	11.47	11.46	10.94	9.30	13.10
L24 MW-05	29.16	16.66	12.50	13.18	15.98	12.46	16.70	18.26	10.90	14.55	14.61	14.84	14.32	16.08	13.08	17.90	11.26	18.39	10.77	12.99	16.17
L14 MW-06	22.97	11.48	11.49	10.28	12.69	8.54	14.43	13.65	9.32	11.49	11.48	8.85	14.12	12.15	10.82	13.06	9.91	13.02	9.95	8.60	14.37
MW-07	22.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-08	23.52	7.99	15.53	5.83	17.69	5.94	17.58	9.85	13.67	9.98	13.54	6.40	17.12	7.12	16.40	8.38	15.14	9.37	14.15	5.53	17.99
MW-09 WEST	19.68	NS	NS	9.06	10.62	8.73	10.95	11.49	8.19	8.96	10.72	8.68	11.00	7.10	12.58	11.47	8.21	7.44	12.24	5.48	14.20
MW-10 NORTH	30.03	17.81	12.22	16.53	13.50	16.60	13.43	19.15	10.88	19.25	10.78	18.15	11.88	17.80	12.23	18.78	11.25	19.26	10.77	16.79	13.24
MW-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-AS	31.50	8.82	22.68	8.61	22.89	7.93	23.57	8.81	22.69	8.34	23.16	7.53	23.97	8.33	23.17	9.49	22.01	9.34	22.16	8.45	23.05
MW-BS	21.30	14.66	6.64	14.03	7.27	15.94	5.36	16.52	4.78	16.17	5.13	14.04	7.26	15.41	5.89	18.04	3.26	16.84	4.46	14.10	7.20
MW-CS	20.13	15.91	4.22	15.15	4.98	14.88	5.25	15.85	4.28	16.33	3.80	15.29	4.84	15.88	4.25	17.93	2.20	16.98	3.15	14.30	5.83
MW-DS	21.05	10.74	10.31	9.42	11.63	9.17	11.88	12.06	8.99	12.07	8.98	10.27	10.78	10.70	10.35	11.52	9.53	11.91	9.14	9.91	11.14
MW-JS	25.14	15.12	10.02	14.65	10.49	13.96	11.18	15.11	10.03	15.08	10.06	14.25	10.89	14.61	10.53	15.29	9.85	15.41	9.73	14.22	10.92
MW-NS	31.64	NA	NA	NA	NA	15.08	16.56	17.08	14.56	16.68	14.96	16.06	15.58	15.61	16.03	16.66	14.98	17.33	14.31	14.72	16.92
MW-PS	28.53	NA	NA	NA	NA	11.57	16.96	13.64	14.89	13.61	14.92	12.82	15.71	12.45	16.08	13.53	15.00	14.00	14.53	11.94	16.59
Bedrock Wells																					
L01 MW-05D	30.95	8.14	22.81	7.61	23.34	6.79	24.16	8.18	22.77	7.70	23.25	6.99	23.96	7.81	23.14	8.92	22.03	8.76	22.19	7.65	23.30
MW-AD	31.43	8.87	22.56	8.53	22.90	8.05	23.38	8.53	22.90	8.45	22.98	7.78	23.65	8.47	22.96	9.43	22.00	9.25	22.18	8.40	23.03
MW-BD	21.24	15.67	5.57	15.12	6.12	14.93	6.31	14.60	6.64	16.68	4.56	15.87	5.37	15.91	5.33	16.45	4.79	16.74	4.50	15.04	6.20
MW-CD	19.93	17.98	1.95	17.05	2.88	16.93	3.00	16.55	3.38	17.98	1.95	16.62	3.31	17.26	2.67	17.93	2.00	18.41	1.52	15.76	4.17
MW-CDD	20.36	12.40	7.96	11.21	9.15	10.98	9.38	12.91	7.45	12.97	7.39	11.93	8.43	11.94	8.42	12.63	7.73	13.04	7.32	10.46	9.90
MW-C3	19.77	NA	NA	NA	NA	10.61	9.16	11.05	8.72	11.13	8.64	10.83	8.94	10.51	9.26	11.07	8.70	11.37	8.40	10.25	9.52
MW-DD	20.75	10.80	9.95	9.80	10.95	9.31	11.44	12.06	8.69	11.98	8.77	10.35	10.40	10.70	10.05	11.52	9.23	11.89	8.86	9.96	10.79
MW-DDD	21.12	10.95	10.17	9.99	11.13	9.38	11.74	12.31	8.81	12.28	8.84	10.72	10.40	10.98	10.14	11.82	9.30	12.19	8.93	10.25	10.87
MW-D3	21.05	NA	NA	NA	NA	11.80	9.25	13.51	7.54	13.43	7.62	12.69	8.36	12.10	8.95	12.92	8.13	13.29	7.76	10.99	10.06
MW-ED	25.71	15.60	10.11	13.91	11.80	14.22	11.49	16.63	9.08	16.69	9.02	15.66	10.05	15.20	10.51	16.33	9.38	16.66	9.05	13.50	12.21
MW-FD	27.76	17.51	10.25	15.95	11.81	16.63	11.13	19.06	8.70	19.06	8.70	17.70	10.06	17.35	10.41	18.39	9.37	18.73	9.03	15.86	11.90
MW-FDD	28.09	NA	NA	NA	NA	19.81	8.28	21.31	6.78	21.23	6.86	20.51	7.58	20.50	7.59	21.32	6.77	21.52	6.57	19.82	8.27
MW-GD	27.23	13.94	13.29	14.45	12.78	14.71	12.52	16.88	10.35	16.93	10.30	15.90	11.33	15.50	11.73	16.49	10.74	16.89	10.34	14.63	12.60
MW-HD	24.84	17.47	7.37	16.54	8.30	16.42	8.42	18.36	6.48	18.26	6.58	17.27	7.57	17.43	7.41	18.23	6.61	18.49	6.35	16.61	8.23
MW-ID	19.42	12.92	6.50	11.76	7.66	12.37	7.05	14.09	5.33	13.82	5.60	13.14	6.28	13.08	6.34	13.34	6.08	14.04	5.38	12.60	6.82
MW-IDD	20.34	NA	NA	NA	NA	16.20	4.14	17.09	3.25	16.97	3.37	16.54	3.80	16.80	3.54	17.39	2.95	17.47	2.87	18.35	1.99
MW-I3[3]	20.41	NA	NA	NA	NA	209.45	-189.04	181.92	-161.51	165.67	-145.26	148.94	-128.53	109.07	-88.66	96.98	-76.57	90.01	-69.60	76.33	-55.92
MW-JD	25.22	14.50	10.72	13.99	11.23	13.42	11.80	14.72	10.50	14.66	10.56	13.77	11.45	14.21	11.01	14.87	10.35	14.98	10.24	13.56	11.66
MW-KD	24.99	13.60	11.39	11.22	13.77	11.42	13.57	14.58	10.41	14.67	10.32	13.18	11.81	13.15	11.84	14.06	10.93	14.56	10.43	12.29	12.70
MW-LD	25.08	13.97	11.11	12.05	13.03	12.66	12.42	15.47	9.61	15.39	9.69	14.01	11.07	14.02	11.06	14.95	10.13	15.44	9.64	11.97	13.11
MW-MD	22.55	13.85	8.70	12.49	10.06	12.29	10.26	15.00	7.55	14.28	8.27	12.39	10.16	13.80	8.75	14.85	7.70	14.77	7.78	12.45	10.10
MW-ND	31.90	NA	NA	NA	NA	13.61	18.29	14.44	17.46	14.51	17.39	14.11	17.79	14.01	17.89	14.54	17.36	14.67	17.23	13.55	18.35
MW-PD	26.86	NA	NA	NA	NA	10.64	16.22	12.75	14.11	12.80	14.06	11.96	14.90	11.58	15.28	12.57	14.29	13.04	13.82	10.97	15.89

Notes:
1) ft. toc = Feet below top of inner casing
2) ft. amsl = Feet above mean sea level
3) MW-I3 was not used in the preparation of Bedrock Potiometeric Surface Maps due to extremely slow recharge

Table 4
Well Construction Specifications
East 10th Street Site
Marcus Hook, Pennsylvania

Monitoring Wells	Elevation of Ground Surface (ft. msl)	Elevation of Inner Casing (ft. msl)	Elevation of Protective Casing (ft. msl)	Well Type	Screen/Open Interval Top (ft. bgs)	Screen/Open Interval Bottom (ft. bgs)	Length of Screen/Open Interval	Total Depth of Well (ft. bgs)	Length of Steel Casing (ft.)
L14 MW-6	20.93	22.97	23.22	Overburden	10	20	10	20	NA
MW-1	19.03	20.90	21.55	Overburden	15	30	15	30	NA
MW-10 NORTH	28.15	30.03	30.24	Overburden	NA	NA	NA	NA	NA
MW-3	14.63	17.14	17.69	Overburden	4	19	15	19	NA
MW-4	26.23	28.30	29.13	Overburden	3	18	15	18	NA
MW-9 WEST	18.53	19.68	19.84	Overburden	NA	NA	NA	NA	NA
L24 MW-5	28.03	29.16	29.31	Overburden	NA	NA	NA	NA	NA
MW-8	23.13	23.52	23.94	Overburden	NA	NA	NA	NA	NA
L01 MW-5	31.21	30.91	31.29	Overburden	5	20	15	20	NA
L17 MW-5	22.70	22.40	22.88	Overburden	NA	NA	NA	NA	NA
L22 MW-2	16.04	15.69	16.05	Overburden	2.5	12.5	10	12.5	NA
MW-5D*	31.23	30.95	31.30	Bedrock	32	70	38	70	32
MW-AD	31.82	31.43	31.93	Bedrock	30	50	20	50	28
MW-AS	31.82	31.50	31.86	Overburden	5	15	10	15	4
MW-BD	19.24	21.24	21.73	Bedrock	68	88	20	127	53
MW-BS	19.37	21.28	21.97	Overburden	19	29	10	29	6
MW-CD	18.40	19.93	20.49	Bedrock	49	69	20	78	46
MW-CS	18.15	20.13	20.77	Overburden	30	40	10	40	6
MW-CDD	18.23	20.36	20.62	Bedrock	90	110	20	110	85
MW-C3	18.27	19.77	20.46	Bedrock	210	230	20	230	28
MW-DD	19.12	20.76	21.21	Bedrock	29	39	10	40	29
MW-DS	19.05	21.06	21.48	Overburden	11.5	21.5	10	21.5	6
MW-DDD	19.04	21.12	21.44	Bedrock	55	77	22	77	50
MW-D3	19.72	21.05	21.39	Bedrock	180	200	20	200	28
MW-ED	23.68	25.71	26.04	Bedrock	40	60	20	60	32
MW-FD*	25.96	No Inner Casing	27.76	Bedrock	32	74	42	74	32
MW-FDD	25.60	28.09	28.57	Bedrock	160	180	20	180	40

Table 4
Well Construction Specifications
East 10th Street Site
Marcus Hook, Pennsylvania

Monitoring Wells	Elevation of Ground Surface (ft. msl)	Elevation of Inner Casing (ft. msl)	Elevation of Protective Casing (ft. msl)	Well Type	Screen/Open Interval Top (ft. bgs)	Screen/Open Interval Bottom (ft. bgs)	Length of Screen/Open Interval	Total Depth of Well (ft. bgs)	Length of Steel Casing (ft.)
MW-GD*	28.13	27.23	28.15	Bedrock	32	54	22	54	32
MW-HD	23.05	24.84	25.13	Bedrock	40	60	20	60	35
MW-ID	17.82	19.42	19.69	Bedrock	29	49	20	49	25
MW-IDD	18.85	20.34	20.69	Bedrock	90	110	20	110	29
MW-I3	18.85	20.41	20.69	Bedrock	195	235	40	250	29
MW-JD	22.78	25.22	25.54	Bedrock	25.5	42.5	17	42.5	20
MW-JS	22.82	25.14	25.45	Overburden	10.5	20	9.5	20	2.5
MW-KD	23.43	24.99	25.22	Bedrock	27	40.3	13.3	40.3	25
MW-LD	22.85	25.08	25.52	Bedrock	32	52	20	52	25
MW-MD	20.35	22.55	23.10	Bedrock	42	62	20	60	34
MW-ND	32.22	31.90	32.24	Bedrock	40	60	20	60	39
MW-NS	32.12	31.64	32.12	Overburden	9	29	20	29	NA
MW-PD	25.20	26.86	27.16	Bedrock	46	66	20	66	37
MW-PS	26.49	28.53	29.13	Overburden	9	24	15	24	NA

Notes:
NA: No information available
ft. msl: Feet below mean sea level
ft. bgs: Feet below ground surface
* Open borehole well
Elevations from August 25, 2017 survey report

Table 5
Former Carbon Disulfide Storage Moat Area Sample Summary - 2004 and 2005
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	Lot 19 SB-1 4/8/2004 Soil 0-2 ft	Lot 19 SB-1 4/8/2004 Soil 10-11	Lot 19 SB-1 4/8/2004 Soil 12-13	Lot 19 SB-2B 4/8/2004 Soil 0-2 ft	Lot 19 SB-2B 4/8/2004 Soil 3-4	Lot 19 SB-2B 4/8/2004 Soil 8-9	Lot 19 SB-3 4/8/2004 Soil 0-2 ft	Lot 19 SB-3 4/8/2004 Soil 15-16	Lot 19 SB-3 4/8/2004 Soil 19-20	Lot 16 SB-4 4/8/2004 Soil 0-2 ft	Lot 16 SB-4 4/8/2004 Soil 12-13	Lot 16 SB-4 4/8/2004 Soil 19-20	Lot 16 SB-5 4/8/2004 Soil 0-2 ft	Lot 16 SB-5 4/8/2004 Soil 7-8	Lot 16 SB-5 4/8/2004 Soil 19-20	Lot 16 SB-6 4/8/2004 Soil 0-2 ft	Lot 16 SB-6 4/8/2004 Soil 7-8	Lot 16 SB-6 4/8/2004 Soil 11-12	Lot 16 SB-7 4/8/2004 Soil 0-2 ft
VOCs by SW8260B, Method SW8260B, mg/kg																								
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.005	< 0.005	< 0.004	< 0.004	< 0.005	0.005 J	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.005	< 0.004	< 0.005	< 0.007	< 0.006	< 0.005	< 0.006
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.004	< 0.005	< 0.005	< 0.004	< 0.005
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.004	< 0.005	< 0.005	< 0.004	< 0.005
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.048	0.015 J	0.039	0.03	0.051	0.05	0.011 J	0.027	0.015 J	0.05	0.059	0.011 J	0.023 J	0.021 J	0.031	0.044	0.022 J	0.017 J	0.023 J
Benzene	mg/kg	290	330	0.13	0.5	0.005 J	< 0.0006	< 0.0005	0.0005 J	0.014	0.001 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0007	< 0.0005	< 0.0006	< 0.0009	< 0.0008	< 0.0007	< 0.0008
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Carbon disulfide	mg/kg	**10,000**	**10,000**	**530**	**620**	0.014	0.002 J	0.28	0.002 J	0.003 J	0.04	0.004 J	0.008	0.038	0.008	0.012	0.044	0.03	0.009	0.29	0.011	0.005 J	0.041	0.002 J
Carbon Tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.004	< 0.003	< 0.003	< 0.003
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.004	< 0.003	< 0.003	< 0.003
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.004	< 0.003	< 0.003	< 0.003
Methylene Chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.004	< 0.003	< 0.003	< 0.003
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Toluene	mg/kg	10,000	10,000	44	100	0.003 J	< 0.001	< 0.001	< 0.001	0.003 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Vinyl Chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002
Xylene (Total)	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.001	< 0.002

Notes:

< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal sample
FD = Field Duplicate
NA = Not Analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = Pennsylvania Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 5
Former Carbon Disulfide Storage Moat Area Sample Summary - 2004 and 2005
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	Lot 16 SB-7 4/8/2004 Soil 14 ft	Lot 16 SB-7 4/8/2004 Soil (dup) 14 ft	Lot 16 SB-7 4/8/2004 Soil 18-19	Lot 16 SB-8 4/12/2004 Soil 0-2 ft	Lot 16 SB-8 4/12/2004 Soil 7-8	Lot 16 SB-8 4/12/2004 Soil 11-12	Lot 16 SB-8 4/12/2004 Soil 18-19	Lot 16 SB-9 4/12/2004 Soil 0-2 ft	Lot 16 SB-9 4/12/2004 Soil 9.5	Lot 16 SB-9 4/12/2004 Soil 19-20	Lot 19 SB-10 4/12/2004 Soil 0-2 ft	Lot 19 SB-10 4/12/2004 Soil 8	Lot 19 SB-10 4/12/2004 Soil 12	Lot 19 SB-11 4/12/2004 Soil 0-2 ft	Lot 19 SB-11 4/12/2004 Soil 13-14 ft	Lot 19 SB-11 4/12/2004 Soil (dup) 13-14 ft	Lot 19 SB-11 4/12/2004 Soil 23-24	Lot 19 SB-12 4/12/2004 Soil 11
VOCs by SW8260B, Method SW8260B, mg/kg																							
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.005	< 0.005	< 0.004	< 0.006	< 0.004	< 0.005	< 0.005	< 0.004	< 0.007	< 0.004	< 0.004	< 0.34	< 0.25	< 0.005	< 0.005	< 0.31	< 0.006	< 0.004
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.004	< 0.004	< 0.003	< 0.005	< 0.003	< 0.004	< 0.004	< 0.003	< 0.005	< 0.003	< 0.003	< 0.25	< 0.19	< 0.004	< 0.004	< 0.23	< 0.004	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.004	< 0.004	< 0.003	< 0.005	< 0.003	< 0.004	< 0.004	< 0.003	< 0.005	< 0.003	< 0.003	< 0.25	< 0.19	< 0.004	< 0.004	< 0.23	< 0.004	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.019 J	0.015 J	0.018 J	0.017 J	0.017 J	0.018 J	0.021 J	0.027	0.038	0.035	0.05	< 0.59	< 0.44	0.089	0.038	< 0.54	0.016 J	0.023
Benzene	mg/kg	290	330	0.13	0.5	< 0.0006	< 0.0006	< 0.0005	< 0.0008	< 0.0005	< 0.0006	< 0.0006	< 0.0005	< 0.0009	< 0.0005	< 0.0006	< 0.042	< 0.032	< 0.0006	< 0.0007	< 0.038	< 0.0007	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Carbon disulfide	mg/kg	**10,000**	**10,000**	**530**	**620**	0.1 J	0.24	0.45	0.092	0.042	0.007	0.039	0.28	0.052	0.2	0.035	280	**660**	0.002 J	0.58	2.9	0.17	0.003 J
Carbon Tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.17	< 0.13	< 0.002	< 0.003	< 0.15	< 0.003	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.17	< 0.13	< 0.002	< 0.003	< 0.15	< 0.003	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.17	< 0.13	< 0.002	< 0.003	< 0.15	< 0.003	< 0.002
Methylene Chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	0.003 J	< 0.002	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.17	< 0.13	< 0.002	< 0.003	< 0.15	< 0.003	< 0.002
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Vinyl Chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001
Xylene (Total)	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.085	< 0.063	< 0.001	< 0.001	< 0.077	< 0.001	< 0.001

Notes:

< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal sample
FD = Field Duplicate
NA = Not Analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = Pennsylvania Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 5
Former Carbon Disulfide Storage Moat Area Sample Summary - 2004 and 2005
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	Lot 19 SB-12 4/12/2004 Soil 21	Lot 19 SB-13 4/12/2004 Soil 0-2 ft	Lot 19 SB-13 4/12/2004 Soil 15-16	Lot 19 SB-13 4/12/2004 Soil 20	Lot 19 SB-15 4/13/2004 Soil 0-2 ft	Lot 19 SB-15 4/13/2004 Soil 10-11	Lot 19 SB-15 4/13/2004 Soil 15-16	Lot 19 SB-17 4/13/2004 Soil 0-2 ft	Lot 19 SB-17 4/13/2004 Soil 15-16	Lot 19 SB-17 4/13/2004 Soil 19-20	Lot 19 SB-17 4/13/2004 Soil 19-20 Dup	Lot 19 SB-18 12/9/2004 Soil 0-2 ft	Lot 19 SB-18D 12/9/2004 Soil (dup) 0-2 ft	Lot 19 SB-18 12/9/2004 Soil 14-15	Lot 19 SB-18 12/9/2004 Soil 11-12	Lot 19 SB-19 12/9/2004 Soil 0-2	Lot 19 SB-19 12/9/2004 Soil 8-9
VOCs by SW8260B, Method SW8260B, mg/kg																						
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.005	< 0.006	< 0.005	< 0.006	< 0.004	< 0.004	< 0.005	< 0.24	< 0.005	< 0.005	< 0.004	< 0.004	< 0.005	< 0.004	< 0.005	< 0.004	< 0.004
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.004	< 0.004	< 0.004	< 0.004	< 0.003	< 0.003	< 0.004	< 0.18	< 0.004	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.004	< 0.004	< 0.004	< 0.004	< 0.003	< 0.003	< 0.004	< 0.18	< 0.004	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.065	0.032	0.015 J	< 0.01	0.025	0.008 J	0.016 J	< 0.42	0.022 J	0.013 J	0.009 J	< 0.007	0.009 J	< 0.007	< 0.008	0.017 J	0.008 J
Benzene	mg/kg	290	330	0.13	0.5	< 0.0007	0.0009 J	< 0.0006	< 0.0007	< 0.0006	< 0.0005	< 0.0006	< 0.3	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/kg	**10,000**	**10,000**	**530**	**620**	0.018	0.039	0.004 J	0.028	0.001 J	0.002 J	< 0.001	< 0.061	< 0.001	0.16	0.21	0.002 J	< 0.001	0.003 J	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.003	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.003	< 0.12	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.003	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.003	< 0.12	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.003	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.003	< 0.12	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.003	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.003	< 0.12	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	0.004 J	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl Chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylene (Total)	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.061	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002 J	< 0.001

Notes:

< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal sample
FD = Field Duplicate
NA = Not Analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = Pennsylvania Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 5
Former Carbon Disulfide Storage Moat Area Sample Summary - 2004 and 2005
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	Lot 19 SB-19 12/9/2004 Soil 14-15	LOT-19-SB-20 18-Oct-05 Solid 9 ft	LOT-19-SB-20 18-Oct-05 Soil 13 ft	LOT-19-SB-20 18-Oct-05 Soil 25 ft	LOT-19-SB-21 19-Oct-05 Solid 6 ft	LOT-19-SB-21 19-Oct-05 Solid 12 ft	LOT-19-SB-23 18-Oct-05 Solid 12 ft	LOT-19-SB-23 18-Oct-05 Soil 17 ft	LOT-19-SB-23 18-Oct-05 Soil (dup) 17 ft	LOT-19-SB-23 18-Oct-05 Soil 29 ft
VOCs by SW8260B, Method SW8260B, mg/kg															
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	mg/kg	10,000	10,000	1,100	400	*< 0.005*	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	mg/kg	2,400	2,800	6.4	26	*< 0.004*	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	*< 0.004*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.013 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	mg/kg	290	330	0.13	0.5	*< 0.0006*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	mg/kg	60	69	2.7	8	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	mg/kg	2,000	2,300	3.5	8	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	mg/kg	**10,000**	**10,000**	**530**	**620**	*< 0.001*	2.4	0.081 J	*< 0.047*	**1,600**	**17,000**	0.95	**1,400**	**3,300**	17
Carbon Tetrachloride	mg/kg	370	430	0.26	0.5	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	mg/kg	10,000	10,000	26	120	*< 0.002*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	mg/kg	97	110	2	8	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	mg/kg	82	95	2.5	8	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	mg/kg	890	1,000	46	70	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl bromide	mg/kg	400	460	0.54	1	*< 0.002*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	mg/kg	1,200	1,400	0.38	3	*< 0.002*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	mg/kg	10,000	10,000	1.5	0.5	0.007	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	mg/kg	10,000	10,000	79	24	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	mg/kg	10,000	10,000	44	100	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	mg/kg	160	180	0.17	0.5	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	mg/kg	61	280	0.027	0.2	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene (Total)	mg/kg	8,000	9,100	990	1,000	*< 0.001*	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal sample
FD = Field Duplicate
NA = Not Analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = Pennsylvania Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L01 MW-05 02-Jun-04 N	L01 MW-05 02-Jun-04 FD	L01 MW-05 08-Jan-07 N	L01 MW-05 10-Mar-08 N	L01 MW-05 18-Jun-08 N	L01 MW-05 16-Dec-08 N	L01 MW-05 18-Mar-09 N	L01 MW-05 11-Jun-09 N	L01 MW-05 23-Sep-09 N
Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000									
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0398	< 0.0398	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0092	< 0.0092	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0094	< 0.0094	< 0.01	< 0.0100	< 0.0102	< 0.0100	< 0.0100	< 0.0072	< 0.0072
Barium	mg/L	2	NS	0.0469	0.0460	0.0482	0.0459	0.0346	0.0287	0.0366	0.0338	0.0261
Beryllium	mg/L	**0.004**	NS	< 0.00097	< 0.00097	< 0.00094	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014
Cadmium	mg/L	**0.005**	NS	0.0027 J	0.0024 J	< 0.00091	0.0017 J	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	47.1	46.2	35.6	42.9	33.3	24.5	29.6	32.7	22.6
Chromium	mg/L	**0.1**	NS	< 0.0030	< 0.0030	< 0.0023	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034
Cobalt	mg/L	**0.035**	NS	0.0082	0.0074	< 0.0021	< 0.0021	0.0160	< 0.0021	< 0.0021	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0022	< 0.0022	< 0.0027	0.0027 J	< 0.0027	< 0.0027	< 0.0027
Iron	mg/L	NS	NS	0.179 J	0.135 J	< 0.0522	< 0.0522	1.29	< 0.0522	< 0.0522	0.153 J	2.54
Lead	mg/L	**0.005**	NS	< 0.0100	< 0.0100	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	52.1	50.6	36.3	45.8	37.3	17.5	33.5	34.3	22.7
Manganese	mg/L	**0.3**	NS	**0.63**	**0.613**	0.0153	< 0.00084	**0.605**	0.0023 J	0.0230	0.0300	0.120
Mercury	mg/L	0.002	NS	< 0.000028	< 0.000028	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0489	0.0485	0.0062 J	0.0111	0.0290	< 0.0056	0.0057 J	0.0079 J	0.0043 J
Potassium	mg/L	NS	NS	0.504	0.475 J	0.652	0.520	0.513	0.825	0.383 J	0.282 J	0.630
Selenium	mg/L	**0.05**	NS	< 0.0059	< 0.0059	< 0.0094	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089
Silver	mg/L	0.1	NS	< 0.0020	< 0.0020	< 0.0016	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023
Sodium	mg/L	NS	NS	369	345	374	322	362	156	301	365	281
Thallium	mg/L	**0.002**	NS	< 0.0099	< 0.0099	< 0.0135	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0015	< 0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Zinc	mg/L	**2**	NS	0.0093 J	0.0081 J	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081
Metals												
Cyanide	mg/L	0.2	NS									
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS	< 0.00010	< 0.00010	< 0.000098						

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L01 MW-05 02-Jun-04 N	L01 MW-05 02-Jun-04 FD	L01 MW-05 08-Jan-07 N	L01 MW-05 10-Mar-08 N	L01 MW-05 18-Jun-08 N	L01 MW-05 16-Dec-08 N	L01 MW-05 18-Mar-09 N	L01 MW-05 11-Jun-09 N	L01 MW-05 23-Sep-09 N
Aroclor 1221	mg/L	0.0017	0.053	< 0.00018	< 0.00017	< 0.000098						
Aroclor 1232	mg/L	0.0017	0.055	< 0.00010	< 0.00010	< 0.000098						
Aroclor 1242	mg/L	0.0017	NS	< 0.00010	< 0.00010	< 0.000098						
Aroclor 1248	mg/L	0.0017	NS	< 0.00010	< 0.00010	< 0.000098						
Aroclor 1254	mg/L	0.0017	NS	< 0.00010	< 0.00010	< 0.000098						
Aroclor 1260	mg/L	0.0017	NS	< 0.00010	< 0.00010	< 0.000098						
Total PCBs	mg/L	0.0005	NS									
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.021	< 0.022	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.011	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	0.001 J	0.001 J	< 0.0008	0.002 J	0.0009 J	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS									
Ethyl acetate	mg/L	0.62	290									
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS									
n-Butyl alcohol	mg/L	12	NS									
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13									
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	0.0009 J
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0828	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0053	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045
Arsenic	mg/L	**0.01**	NS	< 0.0072	< 0.0068	< 0.0068	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.0522	0.0372	0.0374	0.0332	0.0326	0.0350	0.0304	0.0330	0.0321
Beryllium	mg/L	**0.004**	NS	< 0.0014	< 0.00067	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	0.0020 J
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.00076	< 0.00076	< 0.00064	0.00073 J	0.00066 J	< 0.00049	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	49.3	42	42.1	39.3	31.4	32.8	43.8	33.7	29.8
Chromium	mg/L	**0.1**	NS	< 0.0034	< 0.0016	< 0.0016	< 0.0020	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0021	0.0032 J	0.004 J	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0027	< 0.0032	0.0048 J	< 0.0041	< 0.0041	< 0.0040	< 0.0040
Iron	mg/L	NS	NS	< 0.0522	2.2	2.2	< 0.0333	< 0.0747	< 0.0747	< 0.0747	0.959	< 0.0805
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0047	< 0.0047	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060	0.00016 J
Magnesium	mg/L	NS	NS	48.8	43.1	43.1	39.6	30.3	35.4	47.0	34.5	29.1
Manganese	mg/L	**0.3**	NS	< 0.00084	0.121	0.124	< 0.0012	< 0.0018	0.0027 J	< 0.0018	0.0457	0.0041 J
Mercury	mg/L	0.002	NS	< 0.000056	< 0.00006	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0112	0.0124	0.015	0.0092 J	0.0073 J	0.0069 J	0.0055 J	0.0055 J	< 0.0040
Potassium	mg/L	NS	NS	0.436 J	0.743	0.753	0.411 J	0.936	0.686	0.775	0.694	0.563
Selenium	mg/L	**0.05**	NS	< 0.0089	< 0.0084	< 0.0084	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093
Silver	mg/L	0.1	NS	< 0.0023	< 0.0021	< 0.0021	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	391	401	408	391	329	332	401	368	333
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0054	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.002	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0081	0.0051 J	0.0098 J	0.0065 J	0.0062 J	0.0067 J	< 0.0054	< 0.0065	< 0.0065
Metals												
Cyanide	mg/L	0.2	NS				< 0.0050	< 0.0050	< 0.0050	< 0.0050		
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS				< 0.000081	< 0.000080	< 0.000080	< 0.000086		

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Aroclor 1221	mg/L	0.0017	0.053				< 0.000081	< 0.000080	< 0.000080	< 0.000086		
Aroclor 1232	mg/L	0.0017	0.055				< 0.00016	< 0.00016	< 0.00016	< 0.00017		
Aroclor 1242	mg/L	0.0017	NS				< 0.000081	< 0.000080	< 0.000080	< 0.000086		
Aroclor 1248	mg/L	0.0017	NS				< 0.000081	< 0.000080	< 0.000080	< 0.000086		
Aroclor 1254	mg/L	0.0017	NS				< 0.000081	< 0.000080	< 0.000080	< 0.000086		
Aroclor 1260	mg/L	0.0017	NS				< 0.00012	< 0.00012	< 0.00012	< 0.00013		
Total PCBs	mg/L	0.0005	NS				< 0.000081	< 0.000080	< 0.000080	< 0.000086		
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.019	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.00040	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.009	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

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Carbazole	mg/L	0.17	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.0009	< 0.0005	< 0.0005	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0030	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0009	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	0.0007 J	0.0007 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS				< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290				< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
n-Butyl acetate	mg/L	NS	NS				< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS				< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13				< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L01 MW-05 14-Dec-09 N	L01 MW-05 12-Aug-13 N	L01 MW-05 12-Aug-13 FD	L01 MW-05 24-May-16 N	L01 MW-05 14-Oct-16 N	L01 MW-05 04-Jan-17 N	L01 MW-05 23-Mar-17 N	L01 MW-05 15-Aug-17 N	L01 MW-05 25-Oct-17 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L01 MW-05 08-Jan-18 N	L01 MW-05 12-Apr-18 N	L01 MW-05D 08-Jan-07 N	L01 MW-05D 10-Mar-08 N	L01 MW-05D 18-Jun-08 N	L01 MW-05D 16-Dec-08 N	L01 MW-05D 18-Mar-09 N	L01 MW-05D 11-Jun-09 N
Ethylene glycol by SW8015											
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0 Z						
General Parameters											
Sulfate	mg/L	NS	NS								
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS								
General Parameters, Total											
Organic Carbon, Total	mg/L	NS	NS								
Metals, Dissolved											
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0894	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.00045	< 0.00045	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0096	< 0.01	< 0.0100	< 0.0102	< 0.0100	< 0.0100	< 0.0072
Barium	mg/L	2	NS	0.0316	0.0423	0.0649	0.0317	0.0380	0.0355	0.0296	0.0328
Beryllium	mg/L	**0.004**	NS	< 0.0020	< 0.0020	< 0.00094	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0018	< 0.00091	< 0.00090	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	30.4	59.7	136	81.6	90.3	77.6	75.3	76.7
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0033	< 0.0023	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0017	0.0182	0.0042 J	< 0.0021	0.0054	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0040	0.0047 J	< 0.0022	< 0.0022	< 0.0027	< 0.0027	< 0.0027	< 0.0027
Iron	mg/L	NS	NS	< 0.0805	< 0.0805	74.3	47.0	49.8	61.7	51.3	51.4
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.00011	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	31.4	66.5	38.1	27.1	27.4	26.5	26.1	24.7
Manganese	mg/L	**0.3**	NS	0.0017 J	< 0.0016	**4.04**	**3.08**	**3.06**	**3.07**	**2.85**	**3.05**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0061 J	0.0103	< 0.0056	< 0.0056	< 0.0056	< 0.0056	< 0.0056	< 0.0018
Potassium	mg/L	NS	NS	0.547	0.430 J	9.48	7.01	7.24	8.31	6.23	5.97
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0093	< 0.0094	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0089
Silver	mg/L	0.1	NS	< 0.0024	< 0.0024	< 0.0016	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0023
Sodium	mg/L	NS	NS	328	472	113	99.4	103	92.1	97.5	98.2
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.00012	< 0.0135	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0015	< 0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Zinc	mg/L	**2**	NS	< 0.0065	0.0074 J	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081
Metals											
Cyanide	mg/L	0.2	NS								
Metals, Total											
Iron	mg/L	NS	NS								
Manganese	mg/L	**0.3**	NS								
PCBs by SW8082											
Aroclor 1016	mg/L	0.0017	NS			< 0.000096					

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Aroclor 1221	mg/L	0.0017	0.053			< 0.000096					
Aroclor 1232	mg/L	0.0017	0.055			< 0.000096					
Aroclor 1242	mg/L	0.0017	NS			< 0.000096					
Aroclor 1248	mg/L	0.0017	NS			< 0.000096					
Aroclor 1254	mg/L	0.0017	NS			< 0.000096					
Aroclor 1260	mg/L	0.0017	NS			< 0.000096					
Total PCBs	mg/L	0.0005	NS								
SVOCs by SW8270C											
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.019	< 0.021	< 0.021	< 0.019	< 0.022	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.011	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS								

Table 6
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East 10th Street Site
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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B											
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	0.0006 J	< 0.0005	0.0007 J	0.0006 J	0.001 J	0.001 J

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05						
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001						
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96								
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002						
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1						
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	**0.01**	0.003 J	0.003 J	0.005 J	0.003 J	0.003 J
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004						
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L01 MW-05 08-Jan-18 N	L01 MW-05 12-Apr-18 N	L01 MW-05D 08-Jan-07 N	L01 MW-05D 10-Mar-08 N	L01 MW-05D 18-Jun-08 N	L01 MW-05D 16-Dec-08 N	L01 MW-05D 18-Mar-09 N	L01 MW-05D 11-Jun-09 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L01 MW-05D 23-Sep-09 N	L01 MW-05D 14-Dec-09 N	L01 MW-05D 05-Jan-11 N	L01 MW-05D 12-Aug-13 N	L01 MW-05D 24-May-16 N	L01 MW-05D 14-Oct-16 N	L01 MW-05D 04-Jan-17 N	L01 MW-05D 23-Mar-17 N
Ethylene glycol by SW8015											
Ethylene glycol	mg/L	14	1,000,000					< 5.0	< 5.0	< 5.0	< 5.0
General Parameters											
Sulfate	mg/L	NS	NS								
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS								
General Parameters, Total											
Organic Carbon, Total	mg/L	NS	NS								
Metals, Dissolved											
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077
Arsenic	mg/L	**0.01**	NS	< 0.0072	< 0.0072	< 0.0098	< 0.0068	< 0.0078	< 0.0097	< 0.0097	< 0.0097
Barium	mg/L	2	NS	0.0299	0.0305	0.0292	0.0252	0.0220	0.0245	0.0263	0.0213
Beryllium	mg/L	**0.004**	NS	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	0.00078 J	< 0.00064	< 0.00049	0.0013 J	< 0.00049
Calcium	mg/L	NS	NS	72.6	69.7	63.7	54.2	48.2	48.3	47.7	44.1
Chromium	mg/L	**0.1**	NS	< 0.0034	< 0.0034	< 0.0034	0.0016 J	< 0.0020	< 0.0018	< 0.0018	< 0.0018
Cobalt	mg/L	**0.035**	NS	0.0033 J	0.0059	0.0072	0.0017 J	0.0018 J	0.0029 J	0.0038 J	0.0042 J
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0027	< 0.0027	0.0038 J	< 0.0041	< 0.0041	< 0.0041
Iron	mg/L	NS	NS	56.9	61.6	56.0	37	27.7	34.1	37.5	31.7
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051	**2.46**	**0.0107 J**	< 0.0062
Magnesium	mg/L	NS	NS	24.7	24.8	23.0	19	16.1	16.3	16.3	16.6
Manganese	mg/L	**0.3**	NS	**2.88**	**3.13**	**2.99**	**2.26**	**1.85**	**1.88**	**1.99**	**1.74**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0018	0.0021 J	0.0031 J	< 0.0015	< 0.0025	< 0.0028	< 0.0028	< 0.0028
Potassium	mg/L	NS	NS	6.16	5.60	4.99	4.68	4.42	4.05	4.20	4.10
Selenium	mg/L	**0.05**	NS	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Silver	mg/L	0.1	NS	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018	0.0025 J	< 0.0019	< 0.0019
Sodium	mg/L	NS	NS	97.7	103	102	88	77.4	72.3	70.0	70.2
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0094
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	< 0.0025	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	0.0047 J	0.0086 J	< 0.0054	< 0.0054	< 0.0054
Metals											
Cyanide	mg/L	0.2	NS					< 0.0050	< 0.0050	< 0.0050	< 0.0050
Metals, Total											
Iron	mg/L	NS	NS								
Manganese	mg/L	**0.3**	NS								
PCBs by SW8082											
Aroclor 1016	mg/L	0.0017	NS					< 0.000083	< 0.000083	< 0.000080	< 0.000081

Table 6
Groundwater Sample Summary - 2004-2018
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L01 MW-05D 23-Sep-09 N	L01 MW-05D 14-Dec-09 N	L01 MW-05D 05-Jan-11 N	L01 MW-05D 12-Aug-13 N	L01 MW-05D 24-May-16 N	L01 MW-05D 14-Oct-16 N	L01 MW-05D 04-Jan-17 N	L01 MW-05D 23-Mar-17 N
Aroclor 1221	mg/L	0.0017	0.053					< 0.000083	< 0.000083	< 0.000080	< 0.000081
Aroclor 1232	mg/L	0.0017	0.055					< 0.00017	< 0.00017	< 0.00016	< 0.00016
Aroclor 1242	mg/L	0.0017	NS					< 0.000083	< 0.000083	< 0.000080	< 0.000081
Aroclor 1248	mg/L	0.0017	NS					< 0.000083	< 0.000083	< 0.000080	< 0.000081
Aroclor 1254	mg/L	0.0017	NS					< 0.000083	< 0.000083	< 0.000080	< 0.000081
Aroclor 1260	mg/L	0.0017	NS					< 0.00012	< 0.00012	< 0.00012	< 0.00012
Total PCBs	mg/L	0.0005	NS					< 0.000083	< 0.000083	< 0.000080	< 0.000081
SVOCs by SW8270C											
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0009	< 0.001	< 0.001	< 0.0005	0.0009 J	0.0011	0.001	0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.019	< 0.019	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.00040	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.009	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS								

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Carbazole	mg/L	0.17	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.0020	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0030	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
VOCs by SW8260B											
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.002 J	0.002 J	0.003 J	0.004 J	0.007	0.01	0.01	0.008
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	0.0009 J	0.002 J	0.001 J	0.002	0.002	0.003	0.002
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	0.0008 J	0.0007 J	< 0.0005	0.0009 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	0.0005 J	0.0006 J	< 0.0005	0.0006 J
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS					< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290					< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96								
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS					< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS					< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	0.005 J	**0.007**	**0.009**	0.005 J	0.005	**0.007**	**0.006**	**0.007**
Tetrahydrofuran	mg/L	0.13	0.13					< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	0.0008 J	< 0.0007	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	0.0006 J	0.001	0.001	0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0 Z					
General Parameters												
Sulfate	mg/L	NS	NS				161					
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS				41.0					
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS				1.1					
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0894	< 0.0894	< 0.0894	< 0.0398	< 0.0398	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	**0.0092 J**	< 0.00045	< 0.00045	< 0.00045	< 0.0092	< 0.0092	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0094	< 0.0094	< 0.01	< 0.01	< 0.0100
Barium	mg/L	2	NS	0.0246	0.0254	0.0273	0.0191	0.0539	0.0528	0.0456	0.0456	0.0429
Beryllium	mg/L	**0.004**	NS	< 0.0020	0.0021 J	< 0.0020	< 0.0020	< 0.00097	< 0.00097	< 0.00094	< 0.00094	< 0.00090
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00076	< 0.00076	< 0.00091	< 0.00091	< 0.00090
Calcium	mg/L	NS	NS	45.6	48.7	52.3	44.5	149	146	122	122	122
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0030	< 0.0030	< 0.0023	< 0.0023	< 0.0023
Cobalt	mg/L	**0.035**	NS	0.0018 J	0.0020 J	0.0019 J	< 0.0017	< 0.0020	< 0.0020	< 0.0021	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0040	< 0.0040	< 0.0040	0.0046 J	0.0030 J	0.0030 J	0.0024 J	< 0.0022	< 0.0022
Iron	mg/L	NS	NS	33.1	37.3	40.1	19.8	0.217	0.211	< 0.0522	< 0.0522	< 0.0522
Lead	mg/L	**0.005**	NS	< 0.0060	< 0.00011	< 0.00011	< 0.00011	< 0.0100	< 0.0100	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	15.9	16.7	17.3	16.0	26.6	26.3	23	23	22.4
Manganese	mg/L	**0.3**	NS	**1.84**	**1.98**	**2.00**	**1.56**	0.201	0.195	0.0116	0.0118	0.0091
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028	< 0.000028	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0051	< 0.0051	< 0.0056	< 0.0056	< 0.0056
Potassium	mg/L	NS	NS	3.90	4.61	4.04	4.17	9.84	9.68	8.52	8.57	6.77
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0059	< 0.0059	< 0.0094	< 0.0094	< 0.0094
Silver	mg/L	0.1	NS	< 0.0024	< 0.0024	0.0028 J	< 0.0024	< 0.0020	< 0.0020	< 0.0016	< 0.0016	< 0.0016
Sodium	mg/L	NS	NS	65.0	68.1	66.5	66.1	87.6	89.2	83.4	83.1	82.7
Thallium	mg/L	**0.002**	NS	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0099	< 0.0099	< 0.0135	< 0.0135	< 0.0105
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0015	< 0.0015	< 0.0015
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0065	< 0.0065	< 0.0065	< 0.0048	< 0.0048	< 0.0081	< 0.0081	< 0.0081
Metals												
Cyanide	mg/L	0.2	NS									
Metals, Total												
Iron	mg/L	NS	NS				23.9					
Manganese	mg/L	**0.3**	NS				**1.57**					
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS					< 0.00010	< 0.00010	< 0.000098	< 0.000096	

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Aroclor 1221	mg/L	0.0017	0.053					< 0.00018	< 0.00018	< 0.000098	< 0.000096	
Aroclor 1232	mg/L	0.0017	0.055					< 0.00010	< 0.00010	< 0.000098	< 0.000096	
Aroclor 1242	mg/L	0.0017	NS					< 0.00010	< 0.00010	< 0.000098	< 0.000096	
Aroclor 1248	mg/L	0.0017	NS					< 0.00010	< 0.00010	< 0.000098	< 0.000096	
Aroclor 1254	mg/L	0.0017	NS					< 0.00010	< 0.00010	< 0.000098	< 0.000096	
Aroclor 1260	mg/L	0.0017	NS					< 0.00010	< 0.00010	< 0.000098	< 0.000096	
Total PCBs	mg/L	0.0005	NS									
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.001	0.001 J	0.002	0.001 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.009	0.01	0.013	0.007	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	0.002	0.003	0.003	0.002	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L01 MW-05D 15-Aug-17 N	L01 MW-05D 25-Oct-17 N	L01 MW-05D 08-Jan-18 N	L01 MW-05D 12-Apr-18 N	L14 MW-06 03-Jun-04 N	L14 MW-06 03-Jun-04 FD	L14 MW-06 10-Jan-07 N	L14 MW-06 10-Jan-07 FD	L14 MW-06 12-Mar-08 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.0006 J	0.0006 J	0.0008 J	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05					
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001					
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002					
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1					
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	0.005	**0.006**	**0.007**	0.003	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004					
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0007	< 0.0007	< 0.0007	< 0.0007	0.0007 J
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	0.0009 J	0.001	0.002	0.0007 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	0.0008 J

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L01 MW-05D 15-Aug-17 N	L01 MW-05D 25-Oct-17 N	L01 MW-05D 08-Jan-18 N	L01 MW-05D 12-Apr-18 N	L14 MW-06 03-Jun-04 N	L14 MW-06 03-Jun-04 FD	L14 MW-06 10-Jan-07 N	L14 MW-06 10-Jan-07 FD	L14 MW-06 12-Mar-08 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L14 MW-06 19-Jun-08 N	L14 MW-06 22-Dec-08 N	L14 MW-06 18-Mar-09 N	L14 MW-06 10-Jun-09 N	L14 MW-06 23-Sep-09 N	L14 MW-06 16-Dec-09 N	L14 MW-06 11-Jan-11 N	L14 MW-06 14-Aug-13 N	L14 MW-06 25-May-16 N
Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000									< 5.0
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0834	< 0.0828	< 0.0929
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053	< 0.0062
Arsenic	mg/L	**0.01**	NS	< 0.0102	< 0.0100	< 0.0100	< 0.0072	< 0.0072	< 0.0072	< 0.0098	< 0.0068	< 0.0078
Barium	mg/L	2	NS	0.0582	0.0684	0.0468	0.0629	0.0724	0.0574	0.0539	0.146	0.0673
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00076	< 0.00064
Calcium	mg/L	NS	NS	151	155	127	147	162	142	136	213	117
Chromium	mg/L	**0.1**	NS	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	0.0020 J	0.0020 J
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0023	< 0.0013	0.0016 J
Copper	mg/L	1	NS	0.0029 J	< 0.0027	0.0071 J	0.0045 J	0.0058 J	0.0029 J	0.0087 J	< 0.0027	< 0.0032
Iron	mg/L	NS	NS	< 0.0522	< 0.0522	< 0.0522	< 0.0522	0.0992 J	< 0.0522	< 0.0522	0.116 J	1.91
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051
Magnesium	mg/L	NS	NS	25.6	31.0	23.4	23.8	28.3	25.3	21.3	34.1	17.3
Manganese	mg/L	**0.3**	NS	0.122	0.0115	0.0073	0.0556	0.170	0.0236	0.0150	0.260	**0.301**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.000060	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0056	< 0.0056	< 0.0056	0.0023 J	0.0025 J	< 0.0018	< 0.0030	0.0030 J	0.0028 J
Potassium	mg/L	NS	NS	8.96	14.2	6.94	9.20	11.2	9.24	7.73	12.3	6.00
Selenium	mg/L	**0.05**	NS	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097
Silver	mg/L	0.1	NS	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018
Sodium	mg/L	NS	NS	88.4	122	82.0	81.5	125	97.5	78.3	153	57.2
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	< 0.0084
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0020	< 0.0023
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.0057 J	0.0074 J
Metals												
Cyanide	mg/L	0.2	NS									< 0.0050
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS									< 0.000081

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Aroclor 1221	mg/L	0.0017	0.053									< 0.000081
Aroclor 1232	mg/L	0.0017	0.055									< 0.00016
Aroclor 1242	mg/L	0.0017	NS									< 0.000081
Aroclor 1248	mg/L	0.0017	NS									< 0.000081
Aroclor 1254	mg/L	0.0017	NS									< 0.000081
Aroclor 1260	mg/L	0.0017	NS									< 0.00012
Total PCBs	mg/L	0.0005	NS									< 0.000081
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.021	< 0.02	< 0.021	< 0.02	< 0.019	< 0.02	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0006 J
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Ethanol	mg/L	NS	NS									< 0.05
Ethyl acetate	mg/L	0.62	290									< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS									< 0.002
n-Butyl alcohol	mg/L	12	NS									< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13									< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	0.0008 J	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0868	0.101 J	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894	< 0.0398	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	0.0013	< 0.00045	< 0.0092	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0094	< 0.01
Barium	mg/L	2	NS	0.100	0.0468	0.0494	0.0885	0.0975	0.0966	0.0497	0.0674	0.0850
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00097	< 0.00094
Cadmium	mg/L	**0.005**	NS	0.00063 J	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00076	< 0.00091
Calcium	mg/L	NS	NS	143	178	103	140	130	135	100	119	146
Chromium	mg/L	**0.1**	NS	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0030	< 0.0023
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0019	< 0.0019	0.0031 J	< 0.0017	< 0.0017	< 0.0017	< 0.0020	< 0.0021
Copper	mg/L	1	NS	< 0.0041	< 0.0041	< 0.0041	< 0.0040	0.0046 J	< 0.0040	< 0.0040	0.0042 J	< 0.0022
Iron	mg/L	NS	NS	0.381	0.336	0.0776 J	1.33	1.19	0.526	< 0.0805	0.122 J	9.2
Lead	mg/L	**0.005**	NS	< 0.0062	< 0.0062	< 0.0062	**0.0091 J**	0.00012 J	< 0.00011	< 0.00011	< 0.0100	< 0.0069
Magnesium	mg/L	NS	NS	19.8	25.8	16.5	21.9	21.1	21.9	15.6	24.1	24.8
Manganese	mg/L	**0.3**	NS	0.0196	0.0363	0.0302	0.239	0.0329	0.0127	0.0216	0.287	**1.03**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028	< 0.000056
Nickel	mg/L	**0.1**	NS	< 0.0028	0.0028 J	< 0.0028	< 0.0040	0.0051 J	< 0.0040	< 0.0040	< 0.0051	< 0.0056
Potassium	mg/L	NS	NS	8.51	7.22	4.76	7.91	9.25	9.77	5.02	14.9	12.6
Selenium	mg/L	**0.05**	NS	< 0.0097	0.0145 J	< 0.0097	< 0.0093	< 0.0093	**0.103**	< 0.0093	< 0.0059	< 0.0094
Silver	mg/L	0.1	NS	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0020	< 0.0016
Sodium	mg/L	NS	NS	115	87.2	54.0	91.3	133	194	51.7	122	47.7
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0094	< 0.0094	< 0.0137	0.00018 J	0.00030 J	< 0.00012	< 0.0099	< 0.0135
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	0.0016 J	< 0.0015
Zinc	mg/L	**2**	NS	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	0.0056 J	< 0.0081
Metals												
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050						
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS	< 0.000081	< 0.000081	< 0.000081					< 0.000098	< 0.00010

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000081	< 0.000081	< 0.000081					< 0.00017	< 0.00010
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016	< 0.00016					< 0.000098	< 0.00010
Aroclor 1242	mg/L	0.0017	NS	< 0.000081	< 0.000081	< 0.000081					< 0.000098	< 0.00010
Aroclor 1248	mg/L	0.0017	NS	< 0.000081	< 0.000081	< 0.000081					< 0.000098	< 0.00010
Aroclor 1254	mg/L	0.0017	NS	< 0.000081	< 0.000081	< 0.000081					< 0.000098	< 0.00010
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012					< 0.000098	< 0.00010
Total PCBs	mg/L	0.0005	NS	< 0.000081	< 0.000081	< 0.000081						
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0005	0.005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.021	< 0.021
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001 J	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L14 MW-06 19-Oct-16 N	L14 MW-06 09-Jan-17 N	L14 MW-06 29-Mar-17 N	L14 MW-06 22-Aug-17 N	L14 MW-06 31-Oct-17 N	L14 MW-06 11-Jan-18 N	L14 MW-06 18-Apr-18 N	L17 MW-05 02-Jun-04 N	L17 MW-05 11-Jan-07 N
Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002 J	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	0.003	< 0.0005	< 0.0005	< 0.0005	0.001	< 0.0005	< 0.0005	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.003	< 0.0005	< 0.0005	0.001	0.002	0.0009 J	< 0.0005	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	0.007 J	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L14 MW-06 19-Oct-16 N	L14 MW-06 09-Jan-17 N	L14 MW-06 29-Mar-17 N	L14 MW-06 22-Aug-17 N	L14 MW-06 31-Oct-17 N	L14 MW-06 11-Jan-18 N	L14 MW-06 18-Apr-18 N	L17 MW-05 02-Jun-04 N	L17 MW-05 11-Jan-07 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	0.0005 J	0.0005 J	< 0.0005	< 0.0005	< 0.0008	0.003 J
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002		
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	0.002	< 0.0005	< 0.0005	0.002	0.002	0.0007 J	< 0.0005	0.001 J	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004		
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0008 J	0.005 J
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	0.002	< 0.0005	< 0.0005	0.002	0.002	0.001 J	< 0.0005	0.003 J	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L14 MW-06 19-Oct-16 N	L14 MW-06 09-Jan-17 N	L14 MW-06 29-Mar-17 N	L14 MW-06 22-Aug-17 N	L14 MW-06 31-Oct-17 N	L14 MW-06 11-Jan-18 N	L14 MW-06 18-Apr-18 N	L17 MW-05 02-Jun-04 N	L17 MW-05 11-Jan-07 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L17 MW-05 10-Mar-08 N	L17 MW-05 18-Jun-08 N	L17 MW-05 22-Dec-08 N	L17 MW-05 19-Mar-09 N	L17 MW-05 10-Jun-09 N	L17 MW-05 24-Sep-09 N	L17 MW-05 21-Dec-09 N	L17 MW-05 05-Jan-11 N	L17 MW-05 06-Jan-11 N
Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000									
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0834	< 0.0834
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0100
Arsenic	mg/L	**0.01**	NS	< 0.0100	< 0.0102	**0.0109 J**	< 0.0100	**0.0102 J**	0.0094 J	< 0.0072	< 0.0098	< 0.0098
Barium	mg/L	2	NS	0.103	0.0900	0.101	0.0650	0.115	0.107	0.0731	0.0219	0.110
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014
Cadmium	mg/L	**0.005**	NS	< 0.00090	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	176	134	141	138	147	153	125	17.7	151
Chromium	mg/L	**0.1**	NS	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0034
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0023	< 0.0023
Copper	mg/L	1	NS	< 0.0022	< 0.0027	< 0.0027	0.0056 J	< 0.0027	< 0.0027	< 0.0027	0.0028 J	0.0128
Iron	mg/L	NS	NS	12.6	10.7	11.5	0.0724 J	10.9	5.43	3.76	< 0.0522	< 0.0522
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	32.1	25.7	26.1	26.9	24.3	29.4	18.7	19.1	22.9
Manganese	mg/L	**0.3**	NS	**1.21**	**1.13**	**0.973**	0.0746	**0.885**	**1.07**	**0.617**	0.0082	0.112
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0056	< 0.0056	< 0.0056	< 0.0056	< 0.0018	< 0.0018	0.0018 J	0.0066 J	< 0.0030
Potassium	mg/L	NS	NS	13.3	14.1	16.6	12.7	13.2	16.5	11.1	0.328 J	14.1
Selenium	mg/L	**0.05**	NS	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089
Silver	mg/L	0.1	NS	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0023
Sodium	mg/L	NS	NS	64.3	90.1	65.9	93.4	62.5	98.1	35.0	218	73.6
Thallium	mg/L	**0.002**	NS	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	< 0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	0.0084 J	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.0392
Metals												
Cyanide	mg/L	0.2	NS									
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS									

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Aroclor 1221	mg/L	0.0017	0.053									
Aroclor 1232	mg/L	0.0017	0.055									
Aroclor 1242	mg/L	0.0017	NS									
Aroclor 1248	mg/L	0.0017	NS									
Aroclor 1254	mg/L	0.0017	NS									
Aroclor 1260	mg/L	0.0017	NS									
Total PCBs	mg/L	0.0005	NS									
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.021	< 0.021	< 0.02	< 0.021	< 0.021	< 0.02	< 0.02	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	0.001 J	0.001 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	0.002 J	< 0.001	< 0.001	< 0.001	0.001 J	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.003 J	0.006	0.007	0.002 J	0.002 J	0.005 J	< 0.0008	< 0.0008	0.001 J
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS									
Ethyl acetate	mg/L	0.62	290									
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS									
n-Butyl alcohol	mg/L	12	NS									
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13									
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.003 J	0.008	0.006	< 0.0008	0.003 J	0.007	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	0.003 J	< 0.001	< 0.001	< 0.001	0.001 J	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L17 MW-05 10-Mar-08 N	L17 MW-05 18-Jun-08 N	L17 MW-05 22-Dec-08 N	L17 MW-05 19-Mar-09 N	L17 MW-05 10-Jun-09 N	L17 MW-05 24-Sep-09 N	L17 MW-05 21-Dec-09 N	L17 MW-05 05-Jan-11 N	L17 MW-05 06-Jan-11 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L17 MW-05 14-Aug-13 N	L17 MW-05 26-May-16 N	L17 MW-05 26-Oct-16 N	L17 MW-05 17-Jan-17 N	L17 MW-05 31-Mar-17 N	L17 MW-05 21-Aug-17 N	L17 MW-05 07-Nov-17 N	L17 MW-05 08-Jan-18 N	L17 MW-05 11-Apr-18 N
Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	0.00080 J
Arsenic	mg/L	**0.01**	NS	0.0070 J	< 0.0078	< 0.0097	**0.0133 J**	< 0.0097	**0.0113 J**	< 0.0096	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.106	0.0896	0.0519	0.124	0.114	0.102	0.0872	0.0625	0.0960
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.00076	< 0.00064	< 0.00049	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	172	151	71.5	179	203	156	99.7	76.1	132
Chromium	mg/L	**0.1**	NS	< 0.0016	< 0.0020	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0013	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017
Copper	mg/L	1	NS	< 0.0027	0.0087 J	< 0.0041	< 0.0041	< 0.0041	< 0.0040	0.0050 J	< 0.0040	0.0192
Iron	mg/L	NS	NS	11.7	0.0672 J	7.11	7.06	3.88	5.56	8.20	5.00	< 0.0805 K2
Lead	mg/L	**0.005**	NS	< 0.0047	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060	0.00022 J	0.00015 J	< 0.00011
Magnesium	mg/L	NS	NS	26.6	24.3	13.0	30.8	37.2	27.5	19.0	14.9	21.6
Manganese	mg/L	**0.3**	NS	**1.15**	0.0161	**0.695**	**0.830**	**0.963**	**0.925**	**1.04**	**0.889**	0.0288
Mercury	mg/L	0.002	NS	< 0.000060	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0015	< 0.0025	0.0034 J	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Potassium	mg/L	NS	NS	14.8	13.4	8.58	11.7	13.0	13.1	11.3	8.52	13.3
Selenium	mg/L	**0.05**	NS	< 0.0084	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093
Silver	mg/L	0.1	NS	< 0.0021	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	63.2	27.6	115	70.5	43.9	96.2	129	122	22.9
Thallium	mg/L	**0.002**	NS	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0020	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0020	0.0210	< 0.0054	< 0.0054	< 0.0054	< 0.0065	0.0088 J	< 0.0065	0.0648
Metals												
Cyanide	mg/L	0.2	NS		< 0.0050	< 0.0050	< 0.0050	< 0.0050				
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS		< 0.000081	< 0.000081	< 0.000081	< 0.000080				

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L17 MW-05 14-Aug-13 N	L17 MW-05 26-May-16 N	L17 MW-05 26-Oct-16 N	L17 MW-05 17-Jan-17 N	L17 MW-05 31-Mar-17 N	L17 MW-05 21-Aug-17 N	L17 MW-05 07-Nov-17 N	L17 MW-05 08-Jan-18 N	L17 MW-05 11-Apr-18 N
Aroclor 1221	mg/L	0.0017	0.053		< 0.000081	< 0.000081	< 0.000081	< 0.000080				
Aroclor 1232	mg/L	0.0017	0.055		< 0.00016	< 0.00016	< 0.00016	< 0.00016				
Aroclor 1242	mg/L	0.0017	NS		< 0.000081	< 0.000081	< 0.000081	< 0.000080				
Aroclor 1248	mg/L	0.0017	NS		< 0.000081	< 0.000081	< 0.000081	< 0.000080				
Aroclor 1254	mg/L	0.0017	NS		< 0.000081	< 0.000081	< 0.000081	< 0.000080				
Aroclor 1260	mg/L	0.0017	NS		< 0.00012	< 0.00012	< 0.00012	< 0.00012				
Total PCBs	mg/L	0.0005	NS		< 0.000081	< 0.000081	< 0.000081	< 0.000080				
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.00040	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	0.0006	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.0005	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	0.005 J	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	0.007 J	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L17 MW-05 14-Aug-13 N	L17 MW-05 26-May-16 N	L17 MW-05 26-Oct-16 N	L17 MW-05 17-Jan-17 N	L17 MW-05 31-Mar-17 N	L17 MW-05 21-Aug-17 N	L17 MW-05 07-Nov-17 N	L17 MW-05 08-Jan-18 N	L17 MW-05 11-Apr-18 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.001 J	< 0.0005	0.002	< 0.0005	< 0.0005	0.001	0.002	0.001	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005
n-Butyl acetate	mg/L	NS	NS		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13		< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.002 J	< 0.0005	0.003	0.0007 J	< 0.0005	0.002	0.004	0.002	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L17 MW-05 14-Aug-13 N	L17 MW-05 26-May-16 N	L17 MW-05 26-Oct-16 N	L17 MW-05 17-Jan-17 N	L17 MW-05 31-Mar-17 N	L17 MW-05 21-Aug-17 N	L17 MW-05 07-Nov-17 N	L17 MW-05 08-Jan-18 N	L17 MW-05 11-Apr-18 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L22 MW-02 04-Jun-04 N	L22 MW-02 09-Jan-07 N	L22 MW-02 13-Mar-08 N	L22 MW-02 17-Jun-08 N	L22 MW-02 22-Dec-08 N	L22 MW-02 18-Mar-09 N	L22 MW-02 09-Jun-09 N	L22 MW-02 21-Sep-09 N	L22 MW-02 15-Dec-09 N
Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000									
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0398	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0092	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0094	< 0.01	< 0.0100	< 0.0102	< 0.0100	< 0.0100	0.0076 J	< 0.0072	< 0.0072
Barium	mg/L	2	NS	0.0402	0.0396	0.0381	0.0565	0.0434	0.0498	0.0480	0.0551	0.0472
Beryllium	mg/L	**0.004**	NS	< 0.00097	< 0.00094	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014
Cadmium	mg/L	**0.005**	NS	0.0018 J	< 0.00091	< 0.00090	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	176	152	180	155	147	189	172	128	147
Chromium	mg/L	**0.1**	NS	< 0.0025	< 0.0023	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034
Cobalt	mg/L	**0.035**	NS	< 0.0020	< 0.0021	< 0.0021	0.0032 J	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021
Copper	mg/L	1	NS	0.0049 J	0.0051 J	0.0062 J	0.0034 J	0.0080 J	0.0120	< 0.0027	0.0067 J	0.0075 J
Iron	mg/L	NS	NS	0.104 J	< 0.0522	< 0.0522	0.133 J	< 0.0522	< 0.0522	1.64	0.388	0.0923 J
Lead	mg/L	**0.005**	NS	< 0.0100	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	32.1	28.8	30.5	26.0	27.2	32.8	28.2	21.3	24.8
Manganese	mg/L	**0.3**	NS	**0.348**	0.0188	0.0022 J	**2.67**	0.0029 J	0.0093	0.285	**2.46**	0.0182
Mercury	mg/L	0.002	NS	< 0.000028	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0698	0.0320	0.0752	**0.346**	0.0405	0.0603	0.0592	**0.288**	0.0369
Potassium	mg/L	NS	NS	13.9	10.4	10.4	11.6	13.6	10.7	12.3	13.2	10.0
Selenium	mg/L	**0.05**	NS	< 0.0059	< 0.0094	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089
Silver	mg/L	0.1	NS	< 0.0020	< 0.0016	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023
Sodium	mg/L	NS	NS	135	77.5	87.4	92.8	90.4	134	129	112	97.5
Thallium	mg/L	**0.002**	NS	< 0.0099	< 0.0135	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0015	< 0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Zinc	mg/L	**2**	NS	0.0374	0.0468	0.159	0.168	0.0956	0.0982	0.0541	0.119	0.0721
Metals												
Cyanide	mg/L	0.2	NS									
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS	< 0.00010	< 0.000098							

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Aroclor 1221	mg/L	0.0017	0.053	< 0.00017	< 0.000098							
Aroclor 1232	mg/L	0.0017	0.055	< 0.00010	< 0.000098							
Aroclor 1242	mg/L	0.0017	NS	< 0.00010	< 0.000098							
Aroclor 1248	mg/L	0.0017	NS	< 0.00010	< 0.000098							
Aroclor 1254	mg/L	0.0017	NS	< 0.00010	< 0.000098							
Aroclor 1260	mg/L	0.0017	NS	< 0.00010	< 0.000098							
Total PCBs	mg/L	0.0005	NS									
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.021	< 0.021	< 0.021	< 0.021	< 0.02	< 0.02	< 0.02	< 0.019	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.011	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L22 MW-02 04-Jun-04 N	L22 MW-02 09-Jan-07 N	L22 MW-02 13-Mar-08 N	L22 MW-02 17-Jun-08 N	L22 MW-02 22-Dec-08 N	L22 MW-02 18-Mar-09 N	L22 MW-02 09-Jun-09 N	L22 MW-02 21-Sep-09 N	L22 MW-02 15-Dec-09 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS									
Ethyl acetate	mg/L	0.62	290									
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS									
n-Butyl alcohol	mg/L	12	NS									
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13									
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	0.0007 J	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L22 MW-02 05-Jan-11 N	L22 MW-02 13-Aug-13 N	L22 MW-02 26-May-16 N	L22 MW-02 20-Oct-16 N	L22 MW-02 11-Jan-17 N	L22 MW-02 29-Mar-17 N	L22 MW-02 18-Aug-17 N	L22 MW-02 25-Oct-17 N	L22 MW-02 11-Jan-18 N
Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	0.00099 J	0.00061 J
Arsenic	mg/L	**0.01**	NS	< 0.0098	< 0.0068	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.0710	0.0765	0.0611	0.0601	0.0705	0.0602	0.0454	0.0458	0.0573
Beryllium	mg/L	**0.004**	NS	< 0.0014	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	0.0020 J	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.00076	< 0.00064	< 0.00049	< 0.00049	0.00055 J	< 0.0018	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	178	159	136	94.2	129	203	130	122	145
Chromium	mg/L	**0.1**	NS	< 0.0034	0.002 J	< 0.0020	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0023	< 0.0013	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017
Copper	mg/L	1	NS	0.0102	0.0103	0.0057 J	0.0092 J	0.0052 J	0.0091 J	0.0076 J	0.0127	0.0055 J
Iron	mg/L	NS	NS	< 0.0522	< 0.043	< 0.0333	0.0948 J	< 0.0747	< 0.0747	< 0.0805	< 0.0805	< 0.0805
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0047	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060	< 0.00011	< 0.00011
Magnesium	mg/L	NS	NS	29.3	23.7	24.2	15.8	26.4	34.3	21.3	20.2	27.7
Manganese	mg/L	**0.3**	NS	0.0143	0.0806	0.0044 J	0.292	0.0043 J	0.0031 J	0.0871	**0.454**	0.0043 J
Mercury	mg/L	0.002	NS	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0523	0.079	0.0411	0.0801	0.0275	**0.108**	**0.114**	**0.117**	0.0246
Potassium	mg/L	NS	NS	10.9	13.5	11.2	11.1	10.9	11.4	12.8	13.5	10.2
Selenium	mg/L	**0.05**	NS	< 0.0089	< 0.0084	< 0.0097	< 0.0097	< 0.0097	0.0120 J	< 0.0093	< 0.0093	< 0.0093
Silver	mg/L	0.1	NS	< 0.0023	< 0.0021	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	134	113	121	110	169	152	122	122	279
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	0.00036 J	0.00020 J
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	0.0841	0.0921	0.0626	0.0705	0.0525	0.156	0.102	0.0948	0.0490
Metals												
Cyanide	mg/L	0.2	NS			< 0.0050	< 0.0050	< 0.0050	< 0.0050			
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS			< 0.000081	< 0.000083	< 0.000080	< 0.000088			

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Aroclor 1221	mg/L	0.0017	0.053			< 0.000081	< 0.000083	< 0.000080	< 0.000088			
Aroclor 1232	mg/L	0.0017	0.055			< 0.00016	< 0.00017	< 0.00016	< 0.00018			
Aroclor 1242	mg/L	0.0017	NS			< 0.000081	< 0.000083	< 0.000080	< 0.000088			
Aroclor 1248	mg/L	0.0017	NS			< 0.000081	< 0.000083	< 0.000080	< 0.000088			
Aroclor 1254	mg/L	0.0017	NS			< 0.000081	< 0.000083	< 0.000080	< 0.000088			
Aroclor 1260	mg/L	0.0017	NS			< 0.00012	< 0.00012	< 0.00012	< 0.00013			
Total PCBs	mg/L	0.0005	NS			< 0.000081	< 0.000083	< 0.000080	< 0.000088			
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L22 MW-02 05-Jan-11 N	L22 MW-02 13-Aug-13 N	L22 MW-02 26-May-16 N	L22 MW-02 20-Oct-16 N	L22 MW-02 11-Jan-17 N	L22 MW-02 29-Mar-17 N	L22 MW-02 18-Aug-17 N	L22 MW-02 25-Oct-17 N	L22 MW-02 11-Jan-18 N
Carbazole	mg/L	0.17	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	0.0007 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
n-Butyl acetate	mg/L	NS	NS			< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13			< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L22 MW-02 19-Apr-18 N	L24 MW-05 04-Jun-04 N	L24 MW-05 09-Jan-07 N	L24 MW-05 11-Mar-08 N	L24 MW-05 17-Jun-08 N	L24 MW-05 17-Dec-08 N	L24 MW-05 17-Mar-09 N	L24 MW-05 09-Jun-09 N	L24 MW-05 22-Sep-09 N
Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000	< 5.0								
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0398	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	0.0016	< 0.0092	< 0.0097	< 0.0097	< 0.0097	< 0.0097	**0.0120 J**	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0094	< 0.01	< 0.0100	< 0.0102	< 0.0100	< 0.0100	< 0.0072	< 0.0072
Barium	mg/L	2	NS	0.0513	0.0579	0.0499	0.0518	0.0375	0.0476	0.0309	0.0618	0.0608
Beryllium	mg/L	**0.004**	NS	< 0.0020	< 0.00097	< 0.00094	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.00076	< 0.00091	< 0.00090	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	153	91.6	92.6	102	76.2	122	112	111	120
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0025	< 0.0023	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0020	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0040	< 0.0027	0.0085 J	0.0064 J	< 0.0027	0.0069 J	0.0117	0.0052 J	0.0070 J
Iron	mg/L	NS	NS	< 0.0805	6.43	< 0.0522	< 0.0522	8.08	< 0.0522	< 0.0522	< 0.0522	< 0.0522
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.0100	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	27.4	36.8	13	14.5	30.5	17.7	45.7	26.1	32.6
Manganese	mg/L	**0.3**	NS	< 0.0016	**1.68**	0.0041 J	0.0018 J	**1.40**	0.0031 J	0.0455	**1.33**	0.202
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000028	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0928	0.0221	0.0122	0.0180	0.0177	0.0687	0.0276	0.0393	0.0144
Potassium	mg/L	NS	NS	10.5	5.08	7.91	7.88	3.07	11.0	3.62	8.87	7.63
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0059	< 0.0094	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089
Silver	mg/L	0.1	NS	< 0.0024	< 0.0020	< 0.0016	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023
Sodium	mg/L	NS	NS	122	171	26.4	82.2	237	76.5	89.9	281	186
Thallium	mg/L	**0.002**	NS	0.00020 J	< 0.0099	< 0.0135	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0015	< 0.0015	< 0.0025	< 0.0025	0.0049 J	< 0.0025	0.0027 J
Zinc	mg/L	**2**	NS	0.195	0.259	0.295	0.618	0.934	**3.38**	1.77	**2.01**	0.831
Metals												
Cyanide	mg/L	0.2	NS									
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS		< 0.00010	< 0.000099						

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Aroclor 1221	mg/L	0.0017	0.053		< 0.00017	< 0.000099						
Aroclor 1232	mg/L	0.0017	0.055		< 0.00010	< 0.000099						
Aroclor 1242	mg/L	0.0017	NS		< 0.00010	< 0.000099						
Aroclor 1248	mg/L	0.0017	NS		< 0.00010	< 0.000099						
Aroclor 1254	mg/L	0.0017	NS		< 0.00010	< 0.000099						
Aroclor 1260	mg/L	0.0017	NS		< 0.00010	< 0.000099						
Total PCBs	mg/L	0.0005	NS									
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.02	< 0.02	< 0.021	< 0.019	< 0.019	< 0.02	< 0.021	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.009	< 0.01	< 0.011	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L22 MW-02 19-Apr-18 N	L24 MW-05 04-Jun-04 N	L24 MW-05 09-Jan-07 N	L24 MW-05 11-Mar-08 N	L24 MW-05 17-Jun-08 N	L24 MW-05 17-Dec-08 N	L24 MW-05 17-Mar-09 N	L24 MW-05 09-Jun-09 N	L24 MW-05 22-Sep-09 N
Carbazole	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	0.0002 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05								
Ethyl acetate	mg/L	0.62	290	< 0.001								
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002								
n-Butyl alcohol	mg/L	12	NS	< 0.1								
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004								
Toluene	mg/L	1	430	< 0.0005	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L22 MW-02 19-Apr-18 N	L24 MW-05 04-Jun-04 N	L24 MW-05 09-Jan-07 N	L24 MW-05 11-Mar-08 N	L24 MW-05 17-Jun-08 N	L24 MW-05 17-Dec-08 N	L24 MW-05 17-Mar-09 N	L24 MW-05 09-Jun-09 N	L24 MW-05 22-Sep-09 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L24 MW-05 15-Dec-09 N	L24 MW-05 07-Jan-11 N	L24 MW-05 13-Aug-13 N	L24 MW-05 24-May-16 N	L24 MW-05 04-Jan-17 N	L24 MW-05 24-Mar-17 N	L24 MW-05 23-Aug-17 N	L24 MW-05 30-Oct-17 N	L24 MW-05 10-Jan-18 N
Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0894	0.137 J	0.109 J
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0087	0.00065 J	0.0019
Arsenic	mg/L	**0.01**	NS	< 0.0072	< 0.0098	< 0.0068	< 0.0078	< 0.0097	0.0098 J	< 0.0096	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.0491	0.129	0.123	0.0961	0.114	0.0869	0.0790	0.0807	0.0862
Beryllium	mg/L	**0.004**	NS	< 0.0014	< 0.0014	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.00076	< 0.00064	0.0013 J	< 0.00049	< 0.0018	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	94.5	173	113	82.9	158	143	77.9	77.4	80.1
Chromium	mg/L	**0.1**	NS	< 0.0034	< 0.0034	0.0021 J	< 0.0020	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0023	< 0.0013	< 0.00090	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017
Copper	mg/L	1	NS	0.0088 J	0.0130	0.0125	0.0176	0.0168	0.0120	0.0137	0.0049 J	0.0073 J
Iron	mg/L	NS	NS	< 0.0522	0.0549 J	0.0443 J	< 0.0333	< 0.0747	< 0.0747	< 0.0805	0.921	1.06
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0047	< 0.0051	< 0.0062	< 0.0062	< 0.0060	0.00055 J	0.00046 J
Magnesium	mg/L	NS	NS	13.5	28.7	24	12.6	23.4	23.4	30.4	25.7	24.6
Manganese	mg/L	**0.3**	NS	0.0026 J	0.177	**0.568**	0.0035 J	0.0844	0.0465	0.233	**0.733**	**0.763**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0221	0.0175	0.0158	0.0259	**0.175**	0.0844	0.0372	0.0237	0.0189
Potassium	mg/L	NS	NS	7.56	14.0	9.77	8.54	9.59	8.03	3.50	4.77	5.42
Selenium	mg/L	**0.05**	NS	< 0.0089	< 0.0089	< 0.0084	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093
Silver	mg/L	0.1	NS	< 0.0023	< 0.0023	< 0.0021	< 0.0018	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	59.0	223	208	107	93.5	80.0	248	208	227
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0025	0.0034 J	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	0.0026 J
Zinc	mg/L	**2**	NS	0.850	0.689	0.479	0.526	**5.90**	**2.79**	0.925	0.471	0.121
Metals												
Cyanide	mg/L	0.2	NS				< 0.0050	< 0.0050	< 0.0050			
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS				< 0.000081	< 0.000080	< 0.00011			

Table 6
Groundwater Sample Summary - 2004-2018
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Aroclor 1221	mg/L	0.0017	0.053				< 0.000081	< 0.000080	< 0.00011			
Aroclor 1232	mg/L	0.0017	0.055				< 0.00016	< 0.00016	< 0.00021			
Aroclor 1242	mg/L	0.0017	NS				< 0.000081	< 0.000080	< 0.00011			
Aroclor 1248	mg/L	0.0017	NS				< 0.000081	< 0.000080	< 0.00011			
Aroclor 1254	mg/L	0.0017	NS				< 0.000081	< 0.000080	< 0.00011			
Aroclor 1260	mg/L	0.0017	NS				< 0.00012	< 0.00012	< 0.00016			
Total PCBs	mg/L	0.0005	NS				< 0.000081	< 0.000080	< 0.00011			
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002 J
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001 J
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0003 J
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	**0.001**
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	**0.0007**
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	**0.0006**
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.002 J	**0.007**
Caprolactam	mg/L	NS	NS									

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002 J
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.036
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.002
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002 J
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0008
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002 J
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0007
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	0.026
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	0.002 J	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS				< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290				< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
n-Butyl acetate	mg/L	NS	NS				< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS				< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13				< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0007 J	0.0008 J
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L24 MW-05 15-Dec-09 N	L24 MW-05 07-Jan-11 N	L24 MW-05 13-Aug-13 N	L24 MW-05 24-May-16 N	L24 MW-05 04-Jan-17 N	L24 MW-05 24-Mar-17 N	L24 MW-05 23-Aug-17 N	L24 MW-05 30-Oct-17 N	L24 MW-05 10-Jan-18 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L24 MW-05 16-Apr-18 N	LOT-19-SB-20 18-Oct-05 N	MW-01 07-Jun-04 N	MW-03 07-Jun-04 N	MW-03 09-Jan-07 N	MW-03 12-Mar-08 N	MW-03 19-Jun-08 N	MW-03 17-Dec-08 N	MW-03 19-Mar-09 N	MW-03 10-Jun-09 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0									
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894		3.52	< 0.0398	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	0.0033		< 0.0092	< 0.0092	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	**0.0113 J**		< 0.0094	< 0.0094	< 0.01	< 0.0100	< 0.0102	< 0.0100	< 0.0100	< 0.0072
Barium	mg/L	2	NS	0.0575		0.0097	0.127	0.102	0.0974	0.0982	0.109	0.0577	0.117
Beryllium	mg/L	**0.004**	NS	< 0.0020		0.0033 J	< 0.00097	< 0.00094	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014
Cadmium	mg/L	**0.005**	NS	< 0.0018		< 0.00076	< 0.00076	< 0.00091	< 0.00090	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	69.4		50.3	130	109	103	124	133	154	142
Chromium	mg/L	**0.1**	NS	< 0.0033		< 0.0025	< 0.0025	< 0.0023	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034
Cobalt	mg/L	**0.035**	NS	< 0.0017		0.0256	< 0.0020	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021
Copper	mg/L	1	NS	0.0131		< 0.0027	< 0.0027	0.0048 J	0.0032 J	0.0028 J	0.0036 J	0.0062 J	0.0049 J
Iron	mg/L	NS	NS	< 0.0805		17.4	< 0.0495	< 0.0522	< 0.0522	0.108 J	< 0.0522	< 0.0522	< 0.0522
Lead	mg/L	**0.005**	NS	0.00015 J		< 0.0100	< 0.0100	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	11.1		10.5	40.6	22.6	21.8	42.4	29.3	76.6	51.5
Manganese	mg/L	**0.3**	NS	0.0523		**1.1**	0.0422	0.208	0.108	0.0734	0.0397	0.0734	**1.51**
Mercury	mg/L	0.002	NS	< 0.000050		< 0.000028	< 0.000028	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0351		0.0540	< 0.0051	< 0.0056	< 0.0056	< 0.0056	< 0.0056	< 0.0056	0.0206
Potassium	mg/L	NS	NS	9.73		4.33	15.7	11.1	8.52	16.3	12.4	14.7	15.5
Selenium	mg/L	**0.05**	NS	< 0.0093		< 0.0059	< 0.0059	< 0.0094	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0089
Silver	mg/L	0.1	NS	< 0.0024		< 0.0020	< 0.0020	< 0.0016	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0023
Sodium	mg/L	NS	NS	85.3		150	34.4	14	14.2	35.4	19.4	43.3	37.0
Thallium	mg/L	**0.002**	NS	< 0.00012		< 0.0099	< 0.0099	< 0.0135	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	< 0.0016		< 0.0016	< 0.0016	< 0.0015	< 0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Zinc	mg/L	**2**	NS	0.757		0.213	0.0091 J	0.0110 J	< 0.0081	< 0.0081	0.0101 J	< 0.0081	0.0301
Metals													
Cyanide	mg/L	0.2	NS										
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS			< 0.00010	< 0.000099	< 0.000099					

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Aroclor 1221	mg/L	0.0017	0.053			< 0.00018	< 0.00017	< 0.000099					
Aroclor 1232	mg/L	0.0017	0.055			< 0.00010	< 0.000099	< 0.000099					
Aroclor 1242	mg/L	0.0017	NS			< 0.00010	< 0.000099	< 0.000099					
Aroclor 1248	mg/L	0.0017	NS			< 0.00010	< 0.000099	< 0.000099					
Aroclor 1254	mg/L	0.0017	NS			< 0.00010	< 0.000099	< 0.000099					
Aroclor 1260	mg/L	0.0017	NS			< 0.00010	< 0.000099	< 0.000099					
Total PCBs	mg/L	0.0005	NS										
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005		< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01		< 0.022	< 0.021	< 0.02	< 0.02	< 0.02	< 0.021	< 0.02	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004		< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002		< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005		< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01		< 0.011	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001		< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005		< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005		< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005		< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003		< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003		< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003		< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006		< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005		< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005		< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005		< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005		< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05									
Ethyl acetate	mg/L	0.62	290	< 0.001									
Ethylbenzene	mg/L	0.7	0.86	< 0.0005		< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002									
n-Butyl alcohol	mg/L	12	NS	< 0.1									
Styrene	mg/L	0.1	220	< 0.001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005		< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004									
Toluene	mg/L	1	430	< 0.0005		< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005		< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005		< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	L24 MW-05 16-Apr-18 N	LOT-19-SB-20 18-Oct-05 N	MW-01 07-Jun-04 N	MW-03 07-Jun-04 N	MW-03 09-Jan-07 N	MW-03 12-Mar-08 N	MW-03 19-Jun-08 N	MW-03 17-Dec-08 N	MW-03 19-Mar-09 N	MW-03 10-Jun-09 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-03 22-Sep-09 N	MW-03 15-Dec-09 N	MW-03 10-Jan-11 N	MW-03 13-Aug-13 N	MW-03 25-May-16 N	MW-03 18-Oct-16 N	MW-03 09-Jan-17 N	MW-03 29-Mar-17 N	MW-03 22-Aug-17 N	MW-03 30-Oct-17 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000					< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045
Arsenic	mg/L	**0.01**	NS	< 0.0072	< 0.0072	< 0.0098	< 0.0068	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.190	0.104	0.0764	0.146	0.127	0.239	0.0606	0.120	0.259	0.237
Beryllium	mg/L	**0.004**	NS	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.00076	< 0.00064	< 0.00049	< 0.00049	< 0.00049	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	162	107	180	129	128	177	217	139	162	166
Chromium	mg/L	**0.1**	NS	< 0.0034	< 0.0034	< 0.0034	0.0027 J	< 0.0020	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0023	0.0126	< 0.00090	0.0228	< 0.0019	< 0.0019	0.0155	**0.0369**
Copper	mg/L	1	NS	0.0043 J	0.0041 J	< 0.0027	< 0.0027	< 0.0032	< 0.0041	< 0.0041	0.0053 J	< 0.0040	< 0.0040
Iron	mg/L	NS	NS	0.0935 J	0.0759 J	< 0.0522	< 0.043	0.235	9.56	0.128 J	< 0.0747	17.8	9.06
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051	< 0.0062	< 0.0062	< 0.0062	**0.0090 J**	< 0.00011
Magnesium	mg/L	NS	NS	45.9	25.3	75.0	38.8	40.4	66.9	108	41.7	57.0	58.2
Manganese	mg/L	**0.3**	NS	**1.15**	0.0682	0.0359	**2.22**	0.100	**1.84**	0.0414	0.0193	**4.03**	**1.53**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0137	0.0034 J	< 0.0030	0.022	< 0.0025	0.0036 J	0.0034 J	0.0032 J	< 0.0040	0.0073 J
Potassium	mg/L	NS	NS	19.4	8.97	19.6	16.6	11.6	20.7	15.1	10.7	19.1	21.3
Selenium	mg/L	**0.05**	NS	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097	< 0.0097	0.0353	< 0.0097	< 0.0093	< 0.0093
Silver	mg/L	0.1	NS	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	50.9	14.9	44.6	33.1	28.2	67.1	68.5	31.5	50.0	65.8
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	< 0.0025	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	0.0242	0.0167 J	< 0.0081	0.0206	0.0163 J	< 0.0054	0.0119 J	0.0139 J	< 0.0065	0.0280
Metals													
Cyanide	mg/L	0.2	NS					< 0.0050	< 0.0050	< 0.0050	< 0.0050		
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS					< 0.000080	< 0.000081	< 0.000085	< 0.000081		

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-03 22-Sep-09 N	MW-03 15-Dec-09 N	MW-03 10-Jan-11 N	MW-03 13-Aug-13 N	MW-03 25-May-16 N	MW-03 18-Oct-16 N	MW-03 09-Jan-17 N	MW-03 29-Mar-17 N	MW-03 22-Aug-17 N	MW-03 30-Oct-17 N
Aroclor 1221	mg/L	0.0017	0.053					< 0.000080	< 0.000081	< 0.000085	< 0.000081		
Aroclor 1232	mg/L	0.0017	0.055					< 0.00016	< 0.00016	< 0.00017	< 0.00016		
Aroclor 1242	mg/L	0.0017	NS					< 0.000080	< 0.000081	< 0.000085	< 0.000081		
Aroclor 1248	mg/L	0.0017	NS					< 0.000080	< 0.000081	< 0.000085	< 0.000081		
Aroclor 1254	mg/L	0.0017	NS					< 0.000080	< 0.000081	< 0.000085	< 0.000081		
Aroclor 1260	mg/L	0.0017	NS					< 0.00012	< 0.00012	< 0.00013	< 0.00012		
Total PCBs	mg/L	0.0005	NS					< 0.000080	< 0.000081	< 0.000085	< 0.000081		
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.019	< 0.019	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	0.0001 J	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	0.0002 J	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	0.0008 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290					< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
n-Butyl acetate	mg/L	NS	NS					< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS					< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13					< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	0.0009 J	< 0.0007	< 0.0007	0.0008 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0								
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0894	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	0.00054 J	0.0013	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0096	< 0.01	< 0.0100	< 0.0100	< 0.0102	< 0.0100	< 0.0100	< 0.0100	< 0.0100
Barium	mg/L	2	NS	0.207	0.106	0.0248	0.0237	0.0246	0.0259	0.0254	0.0259	0.0232	0.0243
Beryllium	mg/L	**0.004**	NS	< 0.0020	< 0.0020	< 0.00094	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.00090
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0018	< 0.00091	0.00096 J	< 0.00090	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	142	114	20.1	19.9	20.4	20.0	18.1	18.6	19.6	20.8
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0033	< 0.0023	< 0.0023	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030
Cobalt	mg/L	**0.035**	NS	0.0034 J	< 0.0017	0.0145	0.0131	0.0142	0.0141	0.0136	0.0146	0.0125	0.0130
Copper	mg/L	1	NS	< 0.0040	< 0.0040	< 0.0022	< 0.0022	< 0.0022	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027
Iron	mg/L	NS	NS	0.593	< 0.0805	< 0.0522	< 0.0522	< 0.0522	< 0.0522	< 0.0522	< 0.0522	< 0.0522	< 0.0522
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.00011	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	50.3	30.2	24.9	24.6	25.4	24.3	23.8	24.3	22.9	24.3
Manganese	mg/L	**0.3**	NS	0.0932	0.0081	**0.914**	**0.877**	**0.906**	**0.938**	**0.897**	**0.912**	**0.715**	**0.756**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0179	< 0.0040	0.0207	0.0208	0.0207	0.0215	0.0179	0.0190	0.0190	0.0201
Potassium	mg/L	NS	NS	21.4	9.54	0.415 J	0.301 J	0.325 J	0.429 J	0.510	0.522	0.396 J	0.408 J
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0093	< 0.0094	< 0.0094	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0107	< 0.0107
Silver	mg/L	0.1	NS	< 0.0024	< 0.0024	< 0.0016	< 0.0016	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022
Sodium	mg/L	NS	NS	87.7	27.1	40.1	38.8	40.1	44.1	41.9	42.5	45.0	47.9
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.00012	< 0.0135	< 0.0105	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0015	< 0.0015	< 0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Zinc	mg/L	**2**	NS	0.0259	0.0089 J	0.264	0.259	0.268	0.289	0.247	0.256	0.319	0.337
Metals													
Cyanide	mg/L	0.2	NS										
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS			< 0.000098							

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Aroclor 1221	mg/L	0.0017	0.053			< 0.000098							
Aroclor 1232	mg/L	0.0017	0.055			< 0.000098							
Aroclor 1242	mg/L	0.0017	NS			< 0.000098							
Aroclor 1248	mg/L	0.0017	NS			< 0.000098							
Aroclor 1254	mg/L	0.0017	NS			< 0.000098							
Aroclor 1260	mg/L	0.0017	NS			< 0.000098							
Total PCBs	mg/L	0.0005	NS										
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.019	< 0.022	< 0.02	< 0.021	< 0.021	< 0.019	< 0.021	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

Table 6
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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05								
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001								
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002								
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1								
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004								
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-03 09-Jan-18 N	MW-03 19-Apr-18 N	MW-04 11-Jan-07 N	MW-04 12-Mar-08 N	MW-04 12-Mar-08 FD	MW-04 18-Jun-08 N	MW-04 22-Dec-08 N	MW-04 22-Dec-08 FD	MW-04 18-Mar-09 N	MW-04 18-Mar-09 FD

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000										< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0834	< 0.0834	0.0920 J	< 0.0929
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0100	< 0.0053	< 0.0062
Arsenic	mg/L	**0.01**	NS	< 0.0072	< 0.0072	< 0.0072	< 0.0072	< 0.0072	< 0.0072	< 0.0098	< 0.0098	< 0.0068	< 0.0078
Barium	mg/L	2	NS	0.0233	0.0243	0.0268	0.0265	0.0230	0.0233	0.0256	0.0261	0.0656	0.0275
Beryllium	mg/L	**0.004**	NS	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0012 J	0.00097 J
Calcium	mg/L	NS	NS	18.1	18.5	18.4	18.0	18.1	17.7	19.0	19.3	15.4	17.8
Chromium	mg/L	**0.1**	NS	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0016	< 0.0020
Cobalt	mg/L	**0.035**	NS	0.0143	0.0146	0.0171	0.0167	0.0156	0.0156	0.0170	0.0171	0.0222	0.0210
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	0.0072 J	0.0096 J	< 0.0027	0.0045 J
Iron	mg/L	NS	NS	< 0.0522	< 0.0522	0.0759 J	0.0727 J	< 0.0522	< 0.0522	< 0.0522	< 0.0522	< 0.0430	< 0.0333
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051
Magnesium	mg/L	NS	NS	21.4	21.8	21.1	20.9	21.7	21.5	22.0	22.5	18.1	20.7
Manganese	mg/L	**0.3**	NS	**0.888**	**0.929**	**1.01**	**0.994**	**0.924**	**0.919**	**0.960**	**0.979**	**1.25**	**1.15**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.000050	< 0.000060	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0162	0.0167	0.0194	0.0191	0.0172	0.0174	0.0205	0.0196	0.0175	0.0190
Potassium	mg/L	NS	NS	0.437 J	0.447 J	0.587	0.564	0.461 J	0.486 J	0.409 J	0.408 J	0.633	0.503
Selenium	mg/L	**0.05**	NS	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097
Silver	mg/L	0.1	NS	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018
Sodium	mg/L	NS	NS	39.1	40.0	45.6	45.5	39.3	38.7	47.1	48.0	40.3	50.8
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	< 0.0084
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0020	< 0.0023
Zinc	mg/L	**2**	NS	0.264	0.271	0.291	0.290	0.254	0.253	0.307	0.317	0.249	0.261
Metals													
Cyanide	mg/L	0.2	NS										< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS										< 0.000080

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-04 09-Jun-09 N	MW-04 09-Jun-09 FD	MW-04 22-Sep-09 N	MW-04 22-Sep-09 FD	MW-04 16-Dec-09 N	MW-04 16-Dec-09 FD	MW-04 06-Jan-11 N	MW-04 06-Jan-11 FD	MW-04 14-Aug-13 N	MW-04 24-May-16 N
Aroclor 1221	mg/L	0.0017	0.053										< 0.000080
Aroclor 1232	mg/L	0.0017	0.055										< 0.00016
Aroclor 1242	mg/L	0.0017	NS										< 0.000080
Aroclor 1248	mg/L	0.0017	NS										< 0.000080
Aroclor 1254	mg/L	0.0017	NS										< 0.000080
Aroclor 1260	mg/L	0.0017	NS										< 0.00012
Total PCBs	mg/L	0.0005	NS										< 0.000080
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.02	< 0.02	< 0.019	< 0.019	< 0.02	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.009	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

Table 6
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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Ethanol	mg/L	NS	NS										< 0.05
Ethyl acetate	mg/L	0.62	290										< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS										< 0.002
n-Butyl alcohol	mg/L	12	NS										< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13										< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	0.001 J	0.001 J	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	0.0009 J	0.0009 J	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-04 14-Oct-16 N	MW-04 09-Jan-17 N	MW-04 29-Mar-17 N	MW-04 18-Aug-17 N	MW-04 25-Oct-17 N	MW-04 08-Jan-18 N	MW-04 16-Apr-18 N	MW-08 08-Jun-04 N	MW-08 10-Jan-07 N	MW-08 11-Mar-08 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894	< 0.0398	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0092	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096	< 0.0096	**0.0266**	**0.0268**	**0.0220**
Barium	mg/L	2	NS	0.0296	0.0274	0.0267	0.0276	0.0272	0.0259	0.0236	0.0477	0.0410	0.0417
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.00067	< 0.00067	< 0.0020	0.0021 J	< 0.0020	< 0.0020	< 0.00097	< 0.00094	< 0.00090
Cadmium	mg/L	**0.005**	NS	0.0011 J	0.00086 J	0.00077 J	< 0.0018	0.0018 J	< 0.0018	< 0.0018	< 0.00076	< 0.00091	< 0.00090
Calcium	mg/L	NS	NS	17.9	16.9	17.1	15.7	15.7	15.4	16.2	90	86.2	89.1
Chromium	mg/L	**0.1**	NS	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0025	< 0.0023	< 0.0023
Cobalt	mg/L	**0.035**	NS	0.0195	0.0175	0.0185	0.0222	0.0167	0.0158	0.0171	0.0037 J	0.0024 J	< 0.0021
Copper	mg/L	1	NS	< 0.0041	< 0.0041	< 0.0041	< 0.0040	0.0078 J	< 0.0040	< 0.0040	< 0.0027	< 0.0022	< 0.0022
Iron	mg/L	NS	NS	< 0.0747	< 0.0747	< 0.0747	< 0.0805	< 0.0805	< 0.0805	< 0.0805	8.35	4.99	5.56
Lead	mg/L	**0.005**	NS	< 0.0062	< 0.0062	< 0.0062	< 0.0060	< 0.00011	< 0.00011	< 0.00011	< 0.0100	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	20.2	19.8	20.2	18.4	17.6	17.7	19.0	55.8	51.5	53.7
Manganese	mg/L	**0.3**	NS	**1.12**	**1.02**	**1.06**	**1.12**	**0.982**	**0.857**	**0.903**	**2.12**	**1.85**	**1.85**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0175	0.0183	0.0177	0.0185	0.0156	0.0163	0.0170	0.0058 J	< 0.0056	< 0.0056
Potassium	mg/L	NS	NS	0.661	0.478 J	0.502	0.599	0.623	0.524	0.531	0.413 J	0.559	0.524
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0059	< 0.0094	< 0.0094
Silver	mg/L	0.1	NS	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0020	< 0.0016	< 0.0016
Sodium	mg/L	NS	NS	53.8	52.1	51.1	49.7	54.4	56.0	50.3	207	199	211
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0099	< 0.0135	< 0.0105
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	0.0039 J	0.0016 J	0.0020 J
Zinc	mg/L	**2**	NS	0.254	0.238	0.242	0.265	0.278	0.252	0.253	< 0.0048	< 0.0081	< 0.0081
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050							
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000080	< 0.000081	< 0.000081					< 0.000097	< 0.000097	

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000080	< 0.000081	< 0.000081					< 0.00016	< 0.000097	
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016	< 0.00016					< 0.000097	< 0.000097	
Aroclor 1242	mg/L	0.0017	NS	< 0.000080	< 0.000081	< 0.000081					< 0.000097	< 0.000097	
Aroclor 1248	mg/L	0.0017	NS	< 0.000080	< 0.000081	< 0.000081					< 0.000097	< 0.000097	
Aroclor 1254	mg/L	0.0017	NS	< 0.000080	< 0.000081	< 0.000081					< 0.000097	< 0.000097	
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012					< 0.000097	< 0.000097	
Total PCBs	mg/L	0.0005	NS	< 0.000080	< 0.000081	< 0.000081							
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.021	< 0.021
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.00041	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011
Acenaphthene	mg/L	3.8	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.0051	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.0051	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0030	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-04 14-Oct-16 N	MW-04 09-Jan-17 N	MW-04 29-Mar-17 N	MW-04 18-Aug-17 N	MW-04 25-Oct-17 N	MW-04 08-Jan-18 N	MW-04 16-Apr-18 N	MW-08 08-Jun-04 N	MW-08 10-Jan-07 N	MW-08 11-Mar-08 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002 J	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05			
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002			
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1			
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004			
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-04 14-Oct-16 N	MW-04 09-Jan-17 N	MW-04 29-Mar-17 N	MW-04 18-Aug-17 N	MW-04 25-Oct-17 N	MW-04 08-Jan-18 N	MW-04 16-Apr-18 N	MW-08 08-Jun-04 N	MW-08 10-Jan-07 N	MW-08 11-Mar-08 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000									< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	0.0817 J	< 0.0802	< 0.0802	0.0950 J	< 0.0828	< 0.0929	< 0.0868
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053	< 0.0062	< 0.0077
Arsenic	mg/L	**0.01**	NS	**0.0300**	**0.0333**	**0.0200**	**0.0335**	**0.0417**	**0.0253**	**0.0327**	**0.0337**	**0.0309**	**0.0341**
Barium	mg/L	2	NS	0.0462	0.0449	0.0437	0.0463	0.0479	0.0378	0.0458	0.0915	0.0595	0.0636
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011	< 0.00067
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00076	< 0.00064	< 0.00049
Calcium	mg/L	NS	NS	87.0	86.2	91.3	90.8	94.3	93.4	92.6	104	133	121
Chromium	mg/L	**0.1**	NS	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	0.0020 J	< 0.0020	0.0021 J
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	0.0024 J	0.0021 J	0.0025 J	< 0.0021	< 0.0023	0.0015 J	0.0014 J	< 0.0019
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0032	< 0.0041
Iron	mg/L	NS	NS	7.36	5.72	3.24	7.36	7.64	4.36	6.22	7.07	9.03	8.27
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051	< 0.0062
Magnesium	mg/L	NS	NS	51.9	53.1	56.9	52.1	53.9	53.7	47.3	52.3	67.9	60.9
Manganese	mg/L	**0.3**	NS	**1.99**	**1.70**	**1.83**	**1.99**	**1.88**	**1.62**	**2.03**	**2.17**	**2.61**	**2.47**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.000060	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0062 J	< 0.0056	< 0.0056	0.0032 J	0.0047 J	0.0024 J	0.0042 J	0.0038 J	0.0035 J	0.0052 J
Potassium	mg/L	NS	NS	0.500 J	0.981	0.447 J	0.469 J	0.725	0.739	0.606	0.704	0.720	0.902
Selenium	mg/L	**0.05**	NS	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097	< 0.0097
Silver	mg/L	0.1	NS	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018	< 0.0019
Sodium	mg/L	NS	NS	222	212	228	211	213	190	209	200	237	249
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	< 0.0084	< 0.0094
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	0.0060	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0020	< 0.0023	0.0027 J
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0020	< 0.0042	0.0063 J
Metals													
Cyanide	mg/L	0.2	NS									< 0.0050	< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS									< 0.000081	< 0.000083

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Aroclor 1221	mg/L	0.0017	0.053									< 0.000081	< 0.000083
Aroclor 1232	mg/L	0.0017	0.055									< 0.00016	< 0.00017
Aroclor 1242	mg/L	0.0017	NS									< 0.000081	< 0.000083
Aroclor 1248	mg/L	0.0017	NS									< 0.000081	< 0.000083
Aroclor 1254	mg/L	0.0017	NS									< 0.000081	< 0.000083
Aroclor 1260	mg/L	0.0017	NS									< 0.00012	< 0.00013
Total PCBs	mg/L	0.0005	NS									< 0.000081	< 0.000083
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.00050
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.019	< 0.019	< 0.021	< 0.02	< 0.019	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.00040
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00050
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.009	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00050
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.0020
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0030
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001	< 0.0010
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS									< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290									< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS									< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS									< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13									< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	0.001 J	< 0.0007	< 0.0007	< 0.0007	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015												
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 Z			
General Parameters												
Sulfate	mg/L	NS	NS									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									
General Parameters, Total												
Organic Carbon, Total	mg/L	NS	NS									
Metals, Dissolved												
Aluminum	mg/L	NS	NS	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894	< 0.0398	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0092	**0.0114 J**	< 0.0097
Arsenic	mg/L	**0.01**	NS	**0.0258**	**0.0264**	**0.0260**	**0.0366**	**0.0525**	**0.0308**	< 0.0094	< 0.01	< 0.0100
Barium	mg/L	2	NS	0.0636	0.0592	0.0661	0.0723	0.0677	0.0584	0.0182	0.0278	0.0215
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00097	< 0.00094	< 0.00090
Cadmium	mg/L	**0.005**	NS	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	0.00081 J	0.0013 J	0.0016 J
Calcium	mg/L	NS	NS	120	125	125	127	122	129	263	206	210
Chromium	mg/L	**0.1**	NS	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0025	< 0.0023	< 0.0023
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0019	0.0031 J	0.0017 J	0.0020 J	0.0022 J	< 0.0020	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0041	< 0.0041	< 0.0040	< 0.0040	0.0052 J	< 0.0040	0.0100	0.0284	0.0193
Iron	mg/L	NS	NS	6.20	5.53	6.97	8.97	12.2	7.64	< 0.0495	< 0.0522	< 0.0522
Lead	mg/L	**0.005**	NS	< 0.0062	< 0.0062	< 0.0060	< 0.00011	< 0.00011	< 0.00011	< 0.0100	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	61.4	64.3	62.8	63.7	63.3	64.6	86.6	36.2	65.8
Manganese	mg/L	**0.3**	NS	**2.12**	**2.15**	**2.46**	**2.48**	**2.62**	**2.76**	0.0775	0.0507	**0.676**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0040 J	0.0048 J	< 0.0040	0.0045 J	0.0045 J	< 0.0040	0.0482	**0.136**	0.0901
Potassium	mg/L	NS	NS	0.623	0.697	0.851	0.891	0.751	0.815	13.3	12.6	10.6
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0059	< 0.0094	< 0.0094
Silver	mg/L	0.1	NS	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0020	< 0.0016	< 0.0016
Sodium	mg/L	NS	NS	261	235	244	257	266	244	393	100	341
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0099	< 0.0135	< 0.0105
Vanadium	mg/L	**0.0082**	NS	0.0019 J	< 0.0016	< 0.0016	0.0021 J	0.0027 J	0.0017 J	< 0.0016	< 0.0015	< 0.0015
Zinc	mg/L	**2**	NS	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	0.544	0.658	0.628
Metals												
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050							
Metals, Total												
Iron	mg/L	NS	NS									
Manganese	mg/L	**0.3**	NS									
PCBs by SW8082												
Aroclor 1016	mg/L	0.0017	NS	< 0.000081	< 0.000082					< 0.00010	< 0.000099	

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000081	< 0.000082					< 0.00017	< 0.000099	
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016					< 0.00010	< 0.000099	
Aroclor 1242	mg/L	0.0017	NS	< 0.000081	< 0.000082					< 0.00010	< 0.000099	
Aroclor 1248	mg/L	0.0017	NS	< 0.000081	< 0.000082					< 0.00010	< 0.000099	
Aroclor 1254	mg/L	0.0017	NS	< 0.000081	< 0.000082					< 0.00010	< 0.000099	
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012					< 0.00010	< 0.000099	
Total PCBs	mg/L	0.0005	NS	< 0.000081	< 0.000082							
SVOCs by SW8270C												
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.019	< 0.021
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS									

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	0.0001 J	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.12	< 0.0005	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B												
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.03	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.03	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.03	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.06	0.007 J	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.5	< 0.05	< 0.05			
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.01	< 0.001	< 0.001			
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96									
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002			
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 0.1			
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.04	< 0.004	< 0.004			
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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East 10th Street Site
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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015											
Ethylene glycol	mg/L	14	1,000,000								< 5.0
General Parameters											
Sulfate	mg/L	NS	NS								
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS								
General Parameters, Total											
Organic Carbon, Total	mg/L	NS	NS								
Metals, Dissolved											
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0828	< 0.0929
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	**0.0155 J**	**0.0114 J**
Arsenic	mg/L	**0.01**	NS	< 0.0102	< 0.0100	< 0.0100	< 0.0072	< 0.0072	< 0.0072	< 0.0068	< 0.0078
Barium	mg/L	2	NS	0.0197	0.0218	0.0159	0.0194	0.0290	0.0210	0.100	0.0619
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.00077 J	0.00091 J
Calcium	mg/L	NS	NS	192	173	172	168	164	154	153	161
Chromium	mg/L	**0.1**	NS	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	0.0016 J	0.0021 J
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0021	< 0.0021	0.0057	0.0024 J	< 0.0013	< 0.00090
Copper	mg/L	1	NS	0.0108	0.0099 J	0.0150	0.0054 J	0.0129	0.0049 J	0.0194	0.0286
Iron	mg/L	NS	NS	< 0.0522	0.0876 J	0.0593 J	1.28	3.55	0.194 J	< 0.0430	0.105 J
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051
Magnesium	mg/L	NS	NS	62.9	60.0	59.1	54.0	49.7	48.0	17.7	20.9
Manganese	mg/L	**0.3**	NS	**0.466**	**3.02**	**2.97**	**2.92**	**3.28**	**2.55**	0.0480	0.0720
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000060	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0754	**0.128**	0.0881	0.0659	0.0641	0.0407	0.0622	0.0963
Potassium	mg/L	NS	NS	11.4	19.2	9.25	10.1	11.8	10.4	13.3	11.0
Selenium	mg/L	**0.05**	NS	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097
Silver	mg/L	0.1	NS	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018
Sodium	mg/L	NS	NS	369	337	310	328	272	222	36.9	60.5
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	< 0.0084
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0020	< 0.0023
Zinc	mg/L	**2**	NS	0.505	0.454	0.336	0.301	0.265	0.177	0.236	0.451
Metals											
Cyanide	mg/L	0.2	NS								< 0.0050
Metals, Total											
Iron	mg/L	NS	NS								
Manganese	mg/L	**0.3**	NS								
PCBs by SW8082											
Aroclor 1016	mg/L	0.0017	NS								< 0.000082

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Aroclor 1221	mg/L	0.0017	0.053								< 0.000082
Aroclor 1232	mg/L	0.0017	0.055								< 0.00016
Aroclor 1242	mg/L	0.0017	NS								< 0.000082
Aroclor 1248	mg/L	0.0017	NS								< 0.000082
Aroclor 1254	mg/L	0.0017	NS								< 0.000082
Aroclor 1260	mg/L	0.0017	NS								< 0.00012
Total PCBs	mg/L	0.0005	NS								< 0.000082
SVOCs by SW8270C											
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.021	< 0.019	< 0.021	< 0.019	< 0.02	< 0.02	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS								

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
VOCs by SW8260B											
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Ethanol	mg/L	NS	NS								< 0.05
Ethyl acetate	mg/L	0.62	290								< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96								
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS								< 0.002
n-Butyl alcohol	mg/L	12	NS								< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13								< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	0.001 J	< 0.0007	< 0.0007	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	0.001 J	< 0.0008	< 0.0008	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-09 WEST 17-Oct-16 N	MW-09 WEST 11-Jan-17 N	MW-09 WEST 24-Mar-17 N	MW-09 WEST 23-Aug-17 N	MW-09 WEST 06-Nov-17 N	MW-09 WEST 10-Jan-18 N	MW-09 WEST 13-Apr-18 N	MW-10 NORTH 04-Jun-04 N
Ethylene glycol by SW8015											
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 Z	
General Parameters											
Sulfate	mg/L	NS	NS								
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS								
General Parameters, Total											
Organic Carbon, Total	mg/L	NS	NS								
Metals, Dissolved											
Aluminum	mg/L	NS	NS	< 0.0868	0.225	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894	< 0.0398
Antimony	mg/L	**0.006**	NS	< 0.0077	**0.0110 J**	**0.0100 J**	**0.0147 J**	**0.0063**	0.0036	**0.0099**	< 0.0092
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0097	0.0097 J	< 0.0096	< 0.0096	< 0.0096	< 0.0096	**0.0106**
Barium	mg/L	2	NS	0.0525	0.0538	0.0438	0.0677	0.0468	0.0417	0.0576	0.0769
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00097
Cadmium	mg/L	**0.005**	NS	< 0.00049	0.0030 J	0.0012 J	0.0024 J	< 0.0018	< 0.0018	0.0025 J	< 0.00076
Calcium	mg/L	NS	NS	140	196	173	180	163	161	184	85
Chromium	mg/L	**0.1**	NS	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0025
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0020
Copper	mg/L	1	NS	0.0124	0.0519	0.0236	0.0519	0.0276	0.0259	0.0321	< 0.0027
Iron	mg/L	NS	NS	0.242	0.929	0.0879 J	< 0.0805	< 0.0805	< 0.0805	0.120 J	94.6
Lead	mg/L	**0.005**	NS	< 0.0062	< 0.0062	< 0.0062	< 0.0060	0.00034 J	0.00014 J	0.00057 J	< 0.0100
Magnesium	mg/L	NS	NS	40.0	28.2	22.1	26.4	38.1	43.6	26.1	24.4
Manganese	mg/L	**0.3**	NS	**0.433**	0.0833	0.0096	0.290	0.0932	**0.544**	0.0184	**4.9**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028
Nickel	mg/L	**0.1**	NS	0.0297	**0.222**	**0.126**	**0.139**	0.0475	0.0368	**0.130**	< 0.0051
Potassium	mg/L	NS	NS	10.8	10.8	8.76	12.7	12.2	10.5	11.5	3.28
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0059
Silver	mg/L	0.1	NS	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0020
Sodium	mg/L	NS	NS	258	62.2	36.7	88.4	198	235	98.5	271
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0099
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	0.181	1.76	0.780	0.843	0.419	0.306	0.855	< 0.0048
Metals											
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050					
Metals, Total											
Iron	mg/L	NS	NS								
Manganese	mg/L	**0.3**	NS								
PCBs by SW8082											
Aroclor 1016	mg/L	0.0017	NS	< 0.000082	< 0.000080	< 0.000081					< 0.00010

Table 6
Groundwater Sample Summary - 2004-2018
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Aroclor 1221	mg/L	0.0017	0.053	< 0.000082	< 0.000080	< 0.000081					< 0.00017
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016	< 0.00016					< 0.00010
Aroclor 1242	mg/L	0.0017	NS	< 0.000082	< 0.000080	< 0.000081					< 0.00010
Aroclor 1248	mg/L	0.0017	NS	< 0.000082	< 0.000080	< 0.000081					< 0.00010
Aroclor 1254	mg/L	0.0017	NS	< 0.000082	< 0.000080	< 0.000081					< 0.00010
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012					< 0.00010
Total PCBs	mg/L	0.0005	NS	< 0.000082	< 0.000080	< 0.000081					
SVOCs by SW8270C											
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.00041	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001
2-Chlorophenol	mg/L	0.04	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.0021	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001
3-Nitroaniline	mg/L	NS	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.0021	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.0021	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS								

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Carbazole	mg/L	0.17	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.0021	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.0021	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.0021	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.0021	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.0021	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0031	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Phenol	mg/L	2	84,000	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Pyrene	mg/L	0.13	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
VOCs by SW8260B											
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96								
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-10 NORTH 09-Jan-07 N	MW-10 NORTH 11-Mar-08 N	MW-10 NORTH 17-Jun-08 N	MW-10 NORTH 17-Dec-08 N	MW-10 NORTH 17-Mar-09 N	MW-10 NORTH 09-Jun-09 N	MW-10 NORTH 24-Sep-09 N
Ethylene glycol by SW8015										
Ethylene glycol	mg/L	14	1,000,000							
General Parameters										
Sulfate	mg/L	NS	NS							
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS							
General Parameters, Total										
Organic Carbon, Total	mg/L	NS	NS							
Metals, Dissolved										
Aluminum	mg/L	NS	NS	*< 0.0802*	*< 0.0802*	*< 0.0802*	*< 0.0802*	*< 0.0802*	*< 0.0802*	*< 0.0802*
Antimony	mg/L	**0.006**	NS	*< 0.0097*	*< 0.0097*	*< 0.0097*	*< 0.0097*	*< 0.0097*	*< 0.0097*	*< 0.0097*
Arsenic	mg/L	**0.01**	NS	*< 0.01*	**0.0150 J**	**0.0141 J**	**0.0290**	**0.0235**	**0.0120 J**	**0.0232**
Barium	mg/L	2	NS	0.0578	0.0425	0.0532	0.0407	0.0448	0.0469	0.0433
Beryllium	mg/L	**0.004**	NS	*< 0.00094*	*< 0.00090*	*< 0.00090*	*< 0.00090*	*< 0.00090*	*< 0.0014*	*< 0.0014*
Cadmium	mg/L	**0.005**	NS	*< 0.00091*	*< 0.00090*	*< 0.0020*	*< 0.0020*	*< 0.0020*	*< 0.0020*	*< 0.0020*
Calcium	mg/L	NS	NS	95.1	90.3	91.9	98.6	105	103	89.7
Chromium	mg/L	**0.1**	NS	*< 0.0023*	*< 0.0023*	*< 0.0030*	*< 0.0030*	*< 0.0030*	*< 0.0034*	*< 0.0034*
Cobalt	mg/L	**0.035**	NS	*< 0.0021*	*< 0.0021*	*< 0.0021*	*< 0.0021*	*< 0.0021*	*< 0.0021*	*< 0.0021*
Copper	mg/L	1	NS	*< 0.0022*	*< 0.0022*	*< 0.0027*	*< 0.0027*	*< 0.0027*	*< 0.0027*	*< 0.0027*
Iron	mg/L	NS	NS	103	98.8	93.5	122	116	119	103
Lead	mg/L	**0.005**	NS	*< 0.0069*	*< 0.0069*	*< 0.0069*	*< 0.0069*	*< 0.0069*	*< 0.0069*	*< 0.0069*
Magnesium	mg/L	NS	NS	25	23.9	23.8	26.3	27.0	25.6	22.5
Manganese	mg/L	**0.3**	NS	**3.91**	**3.69**	**3.60**	**3.65**	**3.91**	**3.67**	**3.13**
Mercury	mg/L	0.002	NS	*< 0.000056*	*< 0.000056*	*< 0.000056*	*< 0.000056*	*< 0.000056*	*< 0.000056*	*< 0.000056*
Nickel	mg/L	**0.1**	NS	*< 0.0056*	*< 0.0056*	*< 0.0056*	*< 0.0056*	*< 0.0056*	*< 0.0018*	*< 0.0018*
Potassium	mg/L	NS	NS	4.24	3.64	3.67	6.70	3.98	3.78	3.85
Selenium	mg/L	**0.05**	NS	*< 0.0094*	*< 0.0094*	*< 0.0107*	*< 0.0107*	*< 0.0107*	*< 0.0089*	*< 0.0089*
Silver	mg/L	0.1	NS	*< 0.0016*	*< 0.0016*	*< 0.0022*	0.0036 J	*< 0.0022*	*< 0.0023*	*< 0.0023*
Sodium	mg/L	NS	NS	251	232	222	176	256	210	224
Thallium	mg/L	**0.002**	NS	*< 0.0135*	*< 0.0105*	*< 0.0140*	**0.0178 J**	*< 0.0140*	*< 0.0140*	*< 0.0140*
Vanadium	mg/L	**0.0082**	NS	*< 0.0015*	*< 0.0015*	*< 0.0025*	0.0034 J	0.0039 J	*< 0.0025*	*< 0.0025*
Zinc	mg/L	**2**	NS	*< 0.0081*	*< 0.0081*	*< 0.0081*	*< 0.0081*	*< 0.0081*	*< 0.0081*	*< 0.0081*
Metals										
Cyanide	mg/L	0.2	NS							
Metals, Total										
Iron	mg/L	NS	NS							
Manganese	mg/L	**0.3**	NS							
PCBs by SW8082										
Aroclor 1016	mg/L	0.0017	NS	*< 0.000097*						

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000097						
Aroclor 1232	mg/L	0.0017	0.055	< 0.000097						
Aroclor 1242	mg/L	0.0017	NS	< 0.000097						
Aroclor 1248	mg/L	0.0017	NS	< 0.000097						
Aroclor 1254	mg/L	0.0017	NS	< 0.000097						
Aroclor 1260	mg/L	0.0017	NS	< 0.000097						
Total PCBs	mg/L	0.0005	NS							
SVOCs by SW8270C										
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.021	< 0.022	< 0.021	< 0.02	< 0.02	< 0.019	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.009	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS							

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
VOCs by SW8260B										
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	0.001 J	0.011	< 0.001	< 0.001	< 0.001	0.14	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS							
Ethyl acetate	mg/L	0.62	290							
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96							
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS							
n-Butyl alcohol	mg/L	12	NS							
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13							
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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East 10th Street Site
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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015										
Ethylene glycol	mg/L	14	1,000,000				*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
General Parameters										
Sulfate	mg/L	NS	NS							
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS							
General Parameters, Total										
Organic Carbon, Total	mg/L	NS	NS							
Metals, Dissolved										
Aluminum	mg/L	NS	NS	*< 0.0802*	*< 0.0834*	*< 0.0828*	*< 0.0929*	*< 0.0868*	*< 0.0868*	*< 0.0868*
Antimony	mg/L	**0.006**	NS	*< 0.0097*	*< 0.0100*	*< 0.0053*	*< 0.0062*	*< 0.0077*	*< 0.0077*	*< 0.0077*
Arsenic	mg/L	**0.01**	NS	**0.0108 J**	**0.0220**	**0.0203**	**0.0162 J**	**0.0321**	**0.0295**	**0.0463**
Barium	mg/L	2	NS	0.0450	0.0382	0.048	0.0487	0.0419	0.0418	0.0393
Beryllium	mg/L	**0.004**	NS	*< 0.0014*	*< 0.0014*	*< 0.00067*	*< 0.0011*	*< 0.00067*	*< 0.00067*	*< 0.00067*
Cadmium	mg/L	**0.005**	NS	*< 0.0020*	0.0037 J	0.0017 J	*< 0.00064*	0.0028 J	0.0024 J	*< 0.00049*
Calcium	mg/L	NS	NS	87.1	88.6	94.9	69.0	81.0	86.2	88.7
Chromium	mg/L	**0.1**	NS	*< 0.0034*	*< 0.0034*	0.0026 J	0.0025 J	*< 0.0018*	*< 0.0018*	*< 0.0018*
Cobalt	mg/L	**0.035**	NS	*< 0.0021*	*< 0.0023*	*< 0.0013*	*< 0.00090*	*< 0.0019*	*< 0.0019*	*< 0.0019*
Copper	mg/L	1	NS	*< 0.0027*	*< 0.0027*	*< 0.0027*	*< 0.0032*	0.0102	*< 0.0041*	*< 0.0041*
Iron	mg/L	NS	NS	90.6	115	103	51.3	99.9	103	104
Lead	mg/L	**0.005**	NS	*< 0.0069*	*< 0.0069*	*< 0.0047*	*< 0.0051*	*< 0.0062*	**0.0286**	*< 0.0062*
Magnesium	mg/L	NS	NS	20.9	22.4	21.4	15.4	18.1	19.4	20.4
Manganese	mg/L	**0.3**	NS	**3.10**	**3.30**	**3.08**	**2.24**	**2.67**	**2.92**	**2.75**
Mercury	mg/L	0.002	NS	*< 0.000056*	*< 0.000050*	*< 0.00006*	*< 0.000050*	*< 0.000050*	*< 0.000050*	*< 0.000050*
Nickel	mg/L	**0.1**	NS	*< 0.0018*	0.0041 J	*< 0.0015*	*< 0.0025*	*< 0.0140*	*< 0.0028*	*< 0.0028*
Potassium	mg/L	NS	NS	3.87	3.92	4.1	3.70	4.56	4.81	4.79
Selenium	mg/L	**0.05**	NS	*< 0.0089*	*< 0.0089*	*< 0.0084*	*< 0.0097*	*< 0.0097*	0.0163 J	0.0123 J
Silver	mg/L	0.1	NS	*< 0.0023*	*< 0.0023*	*< 0.0021*	*< 0.0018*	*< 0.0019*	*< 0.0019*	*< 0.0019*
Sodium	mg/L	NS	NS	204	197	228	258	198	193	201
Thallium	mg/L	**0.002**	NS	*< 0.0140*	*< 0.0140*	*< 0.0054*	*< 0.0084*	*< 0.0094*	*< 0.0094*	*< 0.0094*
Vanadium	mg/L	**0.0082**	NS	0.0029 J	0.0029 J	*< 0.002*	*< 0.0023*	0.0039 J	0.0017 J	0.0020 J
Zinc	mg/L	**2**	NS	*< 0.0081*	*< 0.0081*	0.0054 J	0.0093 J	*< 0.0054*	*< 0.0054*	*< 0.0054*
Metals										
Cyanide	mg/L	0.2	NS				*< 0.0050*	0.0092 J	*< 0.0050*	*< 0.0050*
Metals, Total										
Iron	mg/L	NS	NS							
Manganese	mg/L	**0.3**	NS							
PCBs by SW8082										
Aroclor 1016	mg/L	0.0017	NS				*< 0.000082*	*< 0.000081*	*< 0.000081*	*< 0.000081*

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-10 NORTH 15-Dec-09 N	MW-10 NORTH 07-Jan-11 N	MW-10 NORTH 13-Aug-13 N	MW-10 NORTH 24-May-16 N	MW-10 NORTH 17-Oct-16 N	MW-10 NORTH 04-Jan-17 N	MW-10 NORTH 24-Mar-17 N
Aroclor 1221	mg/L	0.0017	0.053				< 0.000082	< 0.000081	< 0.000081	< 0.000081
Aroclor 1232	mg/L	0.0017	0.055				< 0.00016	< 0.00016	< 0.00016	< 0.00016
Aroclor 1242	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000081	< 0.000081
Aroclor 1248	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000081	< 0.000081
Aroclor 1254	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000081	< 0.000081
Aroclor 1260	mg/L	0.0017	NS				< 0.00012	< 0.00012	< 0.00012	< 0.00012
Total PCBs	mg/L	0.0005	NS				< 0.000082	< 0.000081	< 0.000081	< 0.000081
SVOCs by SW8270C										
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	0.001	0.0008 J
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.019	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.00040	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	0.0003 J	0.0001 J	0.00020 J	0.0003 J	0.0002 J
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS							

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0051	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	0.0005 J	0.0002 J	0.00030 J	0.0003 J	0.0003 J
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0051	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.0020	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0030	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001
VOCs by SW8260B										
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	0.0006 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	0.004 J	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS				< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290				< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96							
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS				< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS				< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13				< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-10 NORTH 15-Dec-09 N	MW-10 NORTH 07-Jan-11 N	MW-10 NORTH 13-Aug-13 N	MW-10 NORTH 24-May-16 N	MW-10 NORTH 17-Oct-16 N	MW-10 NORTH 04-Jan-17 N	MW-10 NORTH 24-Mar-17 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
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Ethylene glycol by SW8015											
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	5.8 J				
General Parameters											
Sulfate	mg/L	NS	NS								
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS								
General Parameters, Total											
Organic Carbon, Total	mg/L	NS	NS								
Metals, Dissolved											
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0894	0.132 J	< 0.0894	< 0.0398	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0092	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	**0.0263**	**0.0364**	**0.0367**	**0.0284**	< 0.0094	< 0.01	< 0.0100	< 0.0102
Barium	mg/L	2	NS	0.0439	0.0400	0.0365	0.0365	0.0321	0.0327	0.0316	0.0314
Beryllium	mg/L	**0.004**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00097	< 0.00094	< 0.00090	< 0.00090
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0018	0.0025 J	< 0.0018	< 0.00076	0.00091 J	< 0.00090	< 0.0020
Calcium	mg/L	NS	NS	73.6	78.9	80.5	64.8	54.1	43.5	40.4	43.3
Chromium	mg/L	**0.1**	NS	0.0035 J	< 0.0033	< 0.0033	< 0.0033	< 0.0030	< 0.0023	< 0.0023	< 0.0030
Cobalt	mg/L	**0.035**	NS	0.0018 J	< 0.0017	< 0.0017	< 0.0017	0.0070	0.0061	0.0082	0.0072
Copper	mg/L	1	NS	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0027	< 0.0022	< 0.0022	0.0048 J
Iron	mg/L	NS	NS	85.1	91.0	87.5	54.8	53.2	55.1	50.7	53.4
Lead	mg/L	**0.005**	NS	**0.0180**	< 0.00011	< 0.00011	< 0.00011	< 0.0100	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	17.1	18.6	17.1	14.8	18.3	17.5	16.1	17.7
Manganese	mg/L	**0.3**	NS	**2.36**	**2.67**	**2.50**	**2.04**	**1.18**	**1.2**	**1.15**	**1.24**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028	< 0.000056	0.000061 J	< 0.000056
Nickel	mg/L	**0.1**	NS	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0057 J	< 0.0056	< 0.0056	< 0.0056
Potassium	mg/L	NS	NS	4.49	4.27	3.82	3.86	5.11	5.39	5.25	5.00
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0059	< 0.0094	< 0.0094	< 0.0107
Silver	mg/L	0.1	NS	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0020	< 0.0016	< 0.0016	< 0.0022
Sodium	mg/L	NS	NS	214	212	182	234	65.2	62	70.1	70.7
Thallium	mg/L	**0.002**	NS	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0099	< 0.0135	< 0.0105	< 0.0140
Vanadium	mg/L	**0.0082**	NS	0.0019 J	0.0020 J	< 0.0016	< 0.0016	< 0.0016	< 0.0015	< 0.0015	< 0.0025
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0065	< 0.0065	< 0.0065	0.0056 J	< 0.0081	< 0.0081	0.0116 J
Metals											
Cyanide	mg/L	0.2	NS								
Metals, Total											
Iron	mg/L	NS	NS								
Manganese	mg/L	**0.3**	NS								
PCBs by SW8082											
Aroclor 1016	mg/L	0.0017	NS					< 0.000099	< 0.000097		

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Aroclor 1221	mg/L	0.0017	0.053					< 0.00017	< 0.000097		
Aroclor 1232	mg/L	0.0017	0.055					< 0.000099	< 0.000097		
Aroclor 1242	mg/L	0.0017	NS					< 0.000099	< 0.000097		
Aroclor 1248	mg/L	0.0017	NS					< 0.000099	< 0.000097		
Aroclor 1254	mg/L	0.0017	NS					< 0.000099	< 0.000097		
Aroclor 1260	mg/L	0.0017	NS					< 0.000099	< 0.000097		
Total PCBs	mg/L	0.0005	NS								
SVOCs by SW8270C											
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.001 J	0.001 J	< 0.001	0.001 J
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.019	< 0.021	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.002 J	0.001 J	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.009	< 0.011	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	0.0002 J	< 0.0001	0.0002 J	0.0002 J	< 0.001	< 0.0009	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS								

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	0.0003 J	< 0.0001	0.0002 J	0.0002 J	< 0.001	< 0.0009	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.002 J	0.002 J	0.001 J	0.002 J
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.003 J	0.002 J	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0009	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0009	< 0.001	< 0.001
VOCs by SW8260B											
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.002 J	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.027**	**0.012**	**0.007**	**0.008**
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.01**	**0.006**	0.005 J	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.061	0.096	0.075	0.087
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.087**	**0.11**	**0.079**	**0.095**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.002 J	0.001 J	0.001 J	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	0.011 J	0.007 J	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	0.001 J	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.027	0.011	0.011	0.011
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.12**	**0.11**	0.063	**0.075**
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05				
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001				
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96								
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002				
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1				
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.34**	**0.25**	**0.15**	**0.17**
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004				
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.004 J	0.003 J	0.002 J	0.003 J
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.03**	**0.022**	**0.014**	**0.016**
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.003 J**	**0.003 J**	0.002 J	0.002 J
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	0.0005 J	< 0.0005	0.0009 J	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-10 NORTH 23-Aug-17 N	MW-10 NORTH 30-Oct-17 N	MW-10 NORTH 10-Jan-18 N	MW-10 NORTH 16-Apr-18 N	MW-AD 02-Jun-04 N	MW-AD 12-Jan-07 N	MW-AD 17-Mar-08 N	MW-AD 17-Jun-08 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-AD 23-Dec-08 N	MW-AD 23-Mar-09 N	MW-AD 23-Mar-09 FD	MW-AD 15-Jun-09 N	MW-AD 28-Sep-09 N	MW-AD 28-Sep-09 FD	MW-AD 21-Dec-09 N	MW-AD 06-Jan-11 N	MW-AD 20-Aug-13 N	MW-AD 03-Jun-16 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000										< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0834	< 0.0828	0.217
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053	< 0.0062
Arsenic	mg/L	**0.01**	NS	< 0.0100	< 0.0100	< 0.0100	< 0.0072	< 0.0072	< 0.0072	< 0.0072	< 0.0098	< 0.0068	< 0.0078
Barium	mg/L	2	NS	0.0343	0.0285	0.0282	0.0287	0.0314	0.0307	0.0303	0.0299	0.0295	0.0227
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.001 J	< 0.00064
Calcium	mg/L	NS	NS	40.5	34.9	34.4	40.5	40.1	39.2	40.9	39.0	45.8	61.9
Chromium	mg/L	**0.1**	NS	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0016	< 0.0020
Cobalt	mg/L	**0.035**	NS	0.0061	0.0062	0.0061	0.0071	0.0067	0.0066	0.0076	0.0097	0.009	0.0186
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	0.0074 J	< 0.0027	0.0084 J
Iron	mg/L	NS	NS	54.0	45.4	45.6	50.5	53.1	52.0	55.0	55.1	51	93.7
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	**0.0077 J**	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051
Magnesium	mg/L	NS	NS	17.7	15.2	15.0	16.5	16.5	16.1	16.9	17.1	19.4	31.5
Manganese	mg/L	**0.3**	NS	**1.14**	**1.05**	**1.05**	**1.12**	**1.14**	**1.12**	**1.15**	**1.25**	**1.29**	**1.88**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.00006	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0059 J	0.0058 J	< 0.0056	0.0058 J	0.0029 J	0.0029 J	0.0080 J	0.0085 J	0.0086 J	0.0085 J
Potassium	mg/L	NS	NS	6.74	4.59	4.54	5.62	5.12	4.96	5.14	5.12	7.4	6.71
Selenium	mg/L	**0.05**	NS	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097
Silver	mg/L	0.1	NS	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018
Sodium	mg/L	NS	NS	71.2	75.0	74.2	70.3	71.8	69.7	73.0	83.5	80.1	110
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	**0.0211 J**
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.002	< 0.0023
Zinc	mg/L	**2**	NS	0.0082 J	< 0.0081	< 0.0081	0.0086 J	0.0081 J	0.0094 J	< 0.0081	0.0163 J	0.0119 J	0.0195 J
Metals													
Cyanide	mg/L	0.2	NS										< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS										< 0.000081

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-AD 23-Dec-08 N	MW-AD 23-Mar-09 N	MW-AD 23-Mar-09 FD	MW-AD 15-Jun-09 N	MW-AD 28-Sep-09 N	MW-AD 28-Sep-09 FD	MW-AD 21-Dec-09 N	MW-AD 06-Jan-11 N	MW-AD 20-Aug-13 N	MW-AD 03-Jun-16 N
Aroclor 1221	mg/L	0.0017	0.053										< 0.000081
Aroclor 1232	mg/L	0.0017	0.055										< 0.00016
Aroclor 1242	mg/L	0.0017	NS										< 0.000081
Aroclor 1248	mg/L	0.0017	NS										< 0.000081
Aroclor 1254	mg/L	0.0017	NS										< 0.000081
Aroclor 1260	mg/L	0.0017	NS										< 0.00012
Total PCBs	mg/L	0.0005	NS										< 0.000081
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.001 J	0.001 J	0.001 J	0.001 J	0.002 J	0.001 J	0.001 J	0.001 J	0.001	0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.019	< 0.019	< 0.019	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.009	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	0.002 J	0.001 J	0.001 J	0.002 J	0.001 J	0.001 J	0.001 J	< 0.001	0.0008 J	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	0.001 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	**0.011**	**0.005 J**	0.004 J	**0.007**	**0.006**	**0.006**	0.004 J	0.003 J	0.001 J	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	0.005 J	0.003 J	0.003 J	0.004 J	0.004 J	0.004 J	0.003 J	0.002 J	0.001 J	0.0005 J
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.075	0.042	0.042	0.079	0.07	0.069	0.064	0.032	0.041	0.021
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.083**	**0.038**	**0.037**	**0.081**	**0.084**	**0.08**	**0.071**	**0.032**	**0.054**	**0.023**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	0.007 J	0.007 J	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-AD 23-Dec-08 N	MW-AD 23-Mar-09 N	MW-AD 23-Mar-09 FD	MW-AD 15-Jun-09 N	MW-AD 28-Sep-09 N	MW-AD 28-Sep-09 FD	MW-AD 21-Dec-09 N	MW-AD 06-Jan-11 N	MW-AD 20-Aug-13 N	MW-AD 03-Jun-16 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chloroform	mg/L	0.08	0.18	0.008	0.004 J	0.004 J	0.009	0.007	0.007	0.005	0.003 J	0.001 J	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	**0.089**	0.032	0.032	0.069	**0.073**	**0.071**	0.06	0.027	0.035	0.012
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Ethanol	mg/L	NS	NS										< 0.05
Ethyl acetate	mg/L	0.62	290										< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS										< 0.002
n-Butyl alcohol	mg/L	12	NS										< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	**0.18**	**0.066**	**0.065**	**0.13**	**0.16**	**0.16**	**0.12**	**0.05**	**0.063**	**0.029**
Tetrahydrofuran	mg/L	0.13	0.13										< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	0.0008 J	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	0.0008 J
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.003 J	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J	0.001 J	0.001 J	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	**0.018**	**0.009**	**0.008**	**0.014**	**0.014**	**0.014**	**0.012**	**0.007**	**0.008**	0.003
Vinyl chloride	mg/L	**0.002**	0.052	0.002 J	0.001 J	0.001 J	0.002 J	0.002 J	0.002 J	0.002 J	< 0.001	0.001 J	< 0.0005
Xylenes	mg/L	10	12	0.001 J	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 Z			
General Parameters													
Sulfate	mg/L	NS	NS							250			
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS							31.4			
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS							2.0			
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894	< 0.0398	< 0.0802	0.309
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0092	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0097	**0.0118 J**	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0094	< 0.01	< 0.0100
Barium	mg/L	2	NS	0.0221	0.0212	0.0194	0.0209	0.0254	0.0194	0.0237	0.0434	0.0466	0.0469
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00097	< 0.00094	< 0.00090
Cadmium	mg/L	**0.005**	NS	< 0.00049	0.0019 J	< 0.00049	< 0.0018	< 0.0018	< 0.0018	0.0021 J	< 0.00076	< 0.00091	< 0.00090
Calcium	mg/L	NS	NS	58.9	51.7	45.8	46.3	48.0	44.1	47.1	89.2	107	90.9
Chromium	mg/L	**0.1**	NS	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0030	< 0.0023	< 0.0023
Cobalt	mg/L	**0.035**	NS	0.0169	0.0119	0.0074	0.0048 J	0.0107	0.0071	0.0071	0.0078	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040	0.0054 J	< 0.0027	< 0.0022	< 0.0022
Iron	mg/L	NS	NS	84.5	69.8	55.0	51.2	68.9	61.3	59.3	< 0.0495	< 0.0522	0.445
Lead	mg/L	**0.005**	NS	< 0.0310	< 0.0062	< 0.0062	< 0.0060	< 0.00011	< 0.00011	< 0.00011	< 0.0100	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	29.3	22.9	20.4	18.0	22.4	19.3	19.7	24.7	30.2	25.0
Manganese	mg/L	**0.3**	NS	**1.73**	**1.49**	**1.15**	**1.02**	**1.49**	**1.31**	**1.25**	**0.488**	0.0029 J	0.0042 J
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0073 J	< 0.0028	0.0045 J	< 0.0040	0.0103	0.0049 J	0.0060 J	0.0063 J	0.0065 J	0.0068 J
Potassium	mg/L	NS	NS	7.46	6.36	7.25	5.13	5.86	7.74	5.92	4.51	2.94	2.56
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	0.0153 J	< 0.0093	< 0.0059	< 0.0094	< 0.0094
Silver	mg/L	0.1	NS	0.0061	< 0.0019	< 0.0019	< 0.0024	0.0027 J	0.0049 J	< 0.0024	< 0.0020	< 0.0016	< 0.0016
Sodium	mg/L	NS	NS	111	85.1	78.0	70.8	95.1	88.4	79.7	8.74	22.8	14.9
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0099	< 0.0135	< 0.0105
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	0.0025 J	< 0.0016	0.0019 J	< 0.0016	< 0.0016	< 0.0015	< 0.0015
Zinc	mg/L	**2**	NS	0.0124 J	0.0082 J	< 0.0054	< 0.0065	0.0091 J	< 0.0065	0.0072 J	< 0.0048	0.0136 J	0.010 J
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050							
Metals, Total													
Iron	mg/L	NS	NS							60.9			
Manganese	mg/L	**0.3**	NS							**1.27**			
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000082	< 0.000081	< 0.000081					< 0.00010	< 0.000097	

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000082	< 0.000081	< 0.000081					< 0.00017	< 0.000097	
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016	< 0.00016					< 0.00010	< 0.000097	
Aroclor 1242	mg/L	0.0017	NS	< 0.000082	< 0.000081	< 0.000081					< 0.00010	< 0.000097	
Aroclor 1248	mg/L	0.0017	NS	< 0.000082	< 0.000081	< 0.000081					< 0.00010	< 0.000097	
Aroclor 1254	mg/L	0.0017	NS	< 0.000082	< 0.000081	< 0.000081					< 0.00010	< 0.000097	
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012					< 0.00010	< 0.000097	
Total PCBs	mg/L	0.0005	NS	< 0.000082	< 0.000081	< 0.000081							
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.00079 J	0.0009 J	0.001	< 0.0005	< 0.0005	0.0006 J	0.0008 J	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.021	< 0.02	< 0.021
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.00040	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.00010	< 0.0001	< 0.0001	< 0.0001	0.0001 J	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-AD 25-Oct-16 N	MW-AD 05-Jan-17 N	MW-AD 23-Mar-17 N	MW-AD 30-Aug-17 N	MW-AD 27-Oct-17 N	MW-AD 22-Jan-18 N	MW-AD 12-Apr-18 N	MW-AS 02-Jun-04 N	MW-AS 12-Jan-07 N	MW-AS 10-Mar-08 N
Carbazole	mg/L	0.17	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.00050	0.0007 J	0.001	0.001 J	< 0.0005	0.0008 J	0.0007 J	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.00010	< 0.0001	0.0001 J	0.0002 J	0.0001 J	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	0.001	**0.007**	**0.03**	**0.005**	**0.012**	0.003	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	0.001	0.003	**0.007**	0.002	0.004	0.002	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.008	0.036	0.045	0.034	0.016	0.022	0.031	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.008**	**0.051**	**0.062**	**0.038**	**0.018**	**0.023**	**0.04**	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	0.0006 J	0.0007 J	0.002	< 0.0005	0.001	0.0006 J	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-AD 25-Oct-16 N	MW-AD 05-Jan-17 N	MW-AD 23-Mar-17 N	MW-AD 30-Aug-17 N	MW-AD 27-Oct-17 N	MW-AD 22-Jan-18 N	MW-AD 12-Apr-18 N	MW-AS 02-Jun-04 N	MW-AS 12-Jan-07 N	MW-AS 10-Mar-08 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.012**	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	0.0009 J	0.003	0.005	0.001	0.004	0.002	0.006	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.007	0.037	0.06	**0.076**	0.024	0.056	0.04	0.0008 J	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05			
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002			
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1			
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	**0.017**	**0.073**	**0.11**	**0.13**	**0.031**	**0.074**	**0.071**	**0.006**	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004			
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	0.001 J	0.001	0.002	0.0006 J	0.001	0.001	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	0.002	**0.008**	**0.012**	**0.018**	0.005	**0.011**	**0.009**	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	**0.003**	**0.003**	**0.005**	0.001	0.002	**0.003**	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-AD 25-Oct-16 N	MW-AD 05-Jan-17 N	MW-AD 23-Mar-17 N	MW-AD 30-Aug-17 N	MW-AD 27-Oct-17 N	MW-AD 22-Jan-18 N	MW-AD 12-Apr-18 N	MW-AS 02-Jun-04 N	MW-AS 12-Jan-07 N	MW-AS 10-Mar-08 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-AS 17-Jun-08 N	MW-AS 23-Dec-08 N	MW-AS 17-Mar-09 N	MW-AS 10-Jun-09 N	MW-AS 22-Sep-09 N	MW-AS 21-Dec-09 N	MW-AS 06-Jan-11 N	MW-AS 15-Aug-13 N	MW-AS 23-May-16 N	MW-AS 13-Oct-16 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000									< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	0.313	0.235	0.456	< 0.0802	< 0.0802	< 0.0834	0.204	< 0.0929	< 0.0868
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053	< 0.0062	< 0.0077
Arsenic	mg/L	**0.01**	NS	< 0.0102	< 0.0100	< 0.0100	< 0.0072	< 0.0072	< 0.0072	< 0.0098	< 0.0068	< 0.0078	< 0.0097
Barium	mg/L	2	NS	0.0373	0.0475	0.0351	0.0388	0.0414	0.0478	0.0368	0.0702	0.0359	0.0358
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011	< 0.00067
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00076	< 0.00064	< 0.00049
Calcium	mg/L	NS	NS	79.9	76.6	76.4	78.3	72.2	89.5	67.2	105	77.4	74.1
Chromium	mg/L	**0.1**	NS	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	0.0022 J	< 0.0020	< 0.0018
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0023	< 0.0013	< 0.00090	< 0.0019
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0027	0.0031 J	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0032	< 0.0041
Iron	mg/L	NS	NS	< 0.0522	0.550	0.560	0.784	< 0.0522	< 0.0522	0.0792 J	0.209	0.0426 J	< 0.0747
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051	< 0.0062
Magnesium	mg/L	NS	NS	22.7	21.2	24.9	21.5	19.3	24.1	18.9	26.2	20.4	18.8
Manganese	mg/L	**0.3**	NS	< 0.00084	0.0042 J	0.0033 J	0.0046 J	0.0011 J	0.0011 J	0.00092 J	0.0056	0.0015 J	0.0024 J
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	0.000057 J	< 0.000056	< 0.000050	< 0.000060	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0058 J	< 0.0056	< 0.0056	0.0041 J	0.0027 J	0.0064 J	< 0.0030	0.0074 J	0.0072 J	0.0044 J
Potassium	mg/L	NS	NS	2.69	3.37	2.14	2.86	3.16	2.94	2.34	4.24	2.89	3.61
Selenium	mg/L	**0.05**	NS	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097	< 0.0097
Silver	mg/L	0.1	NS	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018	< 0.0019
Sodium	mg/L	NS	NS	13.3	12.5	10.3	12.8	9.49	15.1	9.24	15.5	15.7	17.4
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	< 0.0084	< 0.0094
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0020	< 0.0023	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0081	0.0093 J	< 0.0081	< 0.0081	< 0.0081	0.0124 J	< 0.0081	0.0113 J	0.0120 J	0.0076 J
Metals													
Cyanide	mg/L	0.2	NS									< 0.0050	< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS									< 0.000082	< 0.000081

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Aroclor 1221	mg/L	0.0017	0.053									< 0.000082	< 0.000081
Aroclor 1232	mg/L	0.0017	0.055									< 0.00016	< 0.00016
Aroclor 1242	mg/L	0.0017	NS									< 0.000082	< 0.000081
Aroclor 1248	mg/L	0.0017	NS									< 0.000082	< 0.000081
Aroclor 1254	mg/L	0.0017	NS									< 0.000082	< 0.000081
Aroclor 1260	mg/L	0.0017	NS									< 0.00012	< 0.00012
Total PCBs	mg/L	0.0005	NS									< 0.000082	< 0.000081
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.00051
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.019	< 0.021	< 0.02	< 0.02	< 0.019	< 0.019	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.00040
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00051
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0051
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0051
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00051
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.0020
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0030
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001	< 0.0010
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00051
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS									< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290									< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96				< 0.0005						
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS									< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS									< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13									< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	0.002 J	< 0.0007	< 0.0007	< 0.0007	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	0.001 J	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-AS 17-Jun-08 N	MW-AS 23-Dec-08 N	MW-AS 17-Mar-09 N	MW-AS 10-Jun-09 N	MW-AS 22-Sep-09 N	MW-AS 21-Dec-09 N	MW-AS 06-Jan-11 N	MW-AS 15-Aug-13 N	MW-AS 23-May-16 N	MW-AS 13-Oct-16 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-AS 05-Jan-17 N	MW-AS 23-Mar-17 N	MW-AS 30-Aug-17 N	MW-AS 27-Oct-17 N	MW-AS 22-Jan-18 N	MW-AS 12-Apr-18 N	MW-BD 01-Jun-04 N	MW-BD 11-Jan-07 N	MW-BD 13-Mar-08 N	MW-BD 19-Jun-08 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 Z				
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0868	0.276	< 0.0894	0.602	3.55	0.340	0.0706 J	0.0992 J	0.0997 J	0.0869 J
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0092	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0097	**0.0126 J**	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0094	< 0.01	< 0.0100	< 0.0102
Barium	mg/L	2	NS	0.0283	0.0292	0.0352	0.0376	0.0601	0.0349	0.0864	0.0362	0.0351	0.0344
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00097	< 0.00094	< 0.00090	< 0.00090
Cadmium	mg/L	**0.005**	NS	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00076	< 0.00091	< 0.00090	< 0.0020
Calcium	mg/L	NS	NS	73.6	74.8	80.6	73.2	81.7	82.4	287	92.8	84.5	86.1
Chromium	mg/L	**0.1**	NS	< 0.0018	0.0018 J	< 0.0033	< 0.0033	0.0073 J	< 0.0033	0.0133	< 0.0023	< 0.0023	< 0.0030
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0019	< 0.0017	< 0.0017	0.0028 J	< 0.0017	< 0.0020	< 0.0021	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0027	< 0.0022	< 0.0022	< 0.0027
Iron	mg/L	NS	NS	0.105 J	0.508	< 0.0805	1.27	7.45	0.636	< 0.0495	< 0.0522	< 0.0522	< 0.0522
Lead	mg/L	**0.005**	NS	< 0.0062	< 0.0062	< 0.0060	0.00042 J	0.0023	0.00012 J	< 0.0100	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	19.1	20.6	19.7	18.8	20.3	22.0	< 0.0193	< 0.0322	< 0.0135	0.0477 J
Manganese	mg/L	**0.3**	NS	< 0.0018	0.0042 J	0.0018 J	0.0091	0.0454	0.0044 J	< 0.00084	< 0.00036	< 0.00084	< 0.00084
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0047 J	0.0056 J	0.0041 J	0.0052 J	0.0084 J	0.0055 J	< 0.0051	< 0.0056	< 0.0056	< 0.0056
Potassium	mg/L	NS	NS	2.52	2.66	3.04	2.97	3.63	2.78	52	14.5	12.1	11.4
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	0.0119	< 0.0094	< 0.0094	< 0.0107
Silver	mg/L	0.1	NS	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0020	< 0.0016	< 0.0016	< 0.0022
Sodium	mg/L	NS	NS	13.7	11.6	12.6	11.2	17.6	12.0	174	204	223	207
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0099	< 0.0135	< 0.0105	< 0.0140
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	< 0.0016	0.0082	< 0.0016	**0.0103**	**0.0220**	**0.0166**	**0.0137**
Zinc	mg/L	**2**	NS	0.0095 J	0.0088 J	0.0127 J	0.0084 J	0.0163 J	0.0158 J	< 0.0048	< 0.0081	< 0.0081	< 0.0081
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050								
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000080	< 0.000080					< 0.00010	< 0.000096		

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000080	< 0.000080					< 0.00018	< 0.000096		
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016					< 0.00010	< 0.000096		
Aroclor 1242	mg/L	0.0017	NS	< 0.000080	< 0.000080					< 0.00010	< 0.000096		
Aroclor 1248	mg/L	0.0017	NS	< 0.000080	< 0.000080					< 0.00010	< 0.000096		
Aroclor 1254	mg/L	0.0017	NS	< 0.000080	< 0.000080					< 0.00010	< 0.000096		
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012					< 0.00010	< 0.000096		
Total PCBs	mg/L	0.0005	NS	< 0.000080	< 0.000080								
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.019	< 0.021	< 0.021
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.011
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	0.002 J	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.06**	**0.054**	**0.03**	**0.046**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.004 J	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	0.011 J	< 0.006	< 0.006	< 0.006	0.011 J	0.045	0.035	0.026
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001 J
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.002 J	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05				
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001				
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002				
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004				
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0007	< 0.0007	0.003 J	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	0.003 J	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-AS 05-Jan-17 N	MW-AS 23-Mar-17 N	MW-AS 30-Aug-17 N	MW-AS 27-Oct-17 N	MW-AS 22-Jan-18 N	MW-AS 12-Apr-18 N	MW-BD 01-Jun-04 N	MW-BD 11-Jan-07 N	MW-BD 13-Mar-08 N	MW-BD 19-Jun-08 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BD 18-Dec-08 N	MW-BD 19-Mar-09 N	MW-BD 11-Jun-09 N	MW-BD 24-Sep-09 N	MW-BD 16-Dec-09 N	MW-BD 07-Jan-11 N	MW-BD 19-Aug-13 N	MW-BD 31-May-16 N	MW-BD 19-Oct-16 N	MW-BD 10-Jan-17 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000								< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	0.102 J	0.0830 J	0.168 J	0.106 J	< 0.0828	0.106 J	< 0.0868	0.170 J
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077
Arsenic	mg/L	**0.01**	NS	< 0.0100	**0.0104 J**	**0.0149 J**	**0.0118 J**	**0.0121 J**	**0.0144 J**	**0.0194 J**	**0.0149 J**	**0.0176 J**	**0.0117 J**
Barium	mg/L	2	NS	0.0325	0.0338	0.0367	0.0315	0.0329	0.0360	0.0385	0.0458	0.0431	0.0449
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011	< 0.00067	< 0.00067
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00076	< 0.00064	< 0.00049	< 0.00049
Calcium	mg/L	NS	NS	78.2	82.9	79.4	79.9	83.5	80.6	80.9	85.1	84.5	83.5
Chromium	mg/L	**0.1**	NS	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0016	< 0.0020	< 0.0018	< 0.0018
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0023	< 0.0013	< 0.00090	< 0.0019	< 0.0019
Copper	mg/L	1	NS	< 0.0027	0.0032 J	0.0029 J	< 0.0027	< 0.0027	< 0.0027	< 0.0027	0.0034 J	< 0.0041	< 0.0041
Iron	mg/L	NS	NS	< 0.0522	< 0.0522	< 0.0522	< 0.0522	< 0.0522	< 0.0522	< 0.043	< 0.0333	< 0.0747	< 0.0747
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051	< 0.0062	< 0.0062
Magnesium	mg/L	NS	NS	0.108	0.0633 J	0.106	0.0862 J	0.105	0.0848 J	0.12	0.193	0.391	0.350
Manganese	mg/L	**0.3**	NS	0.0014 J	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084	0.0016 J	< 0.0012	< 0.0018	< 0.0018
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0056	< 0.0056	0.0028 J	< 0.0018	< 0.0018	< 0.0030	0.0053 J	0.0025 J	< 0.0028	< 0.0028
Potassium	mg/L	NS	NS	15.7	10.2	10.3	9.91	10.2	9.11	8.91	8.30	8.91	8.23
Selenium	mg/L	**0.05**	NS	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097	< 0.0097	< 0.0097
Silver	mg/L	0.1	NS	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018	< 0.0019	< 0.0019
Sodium	mg/L	NS	NS	192	211	196	197	187	213	198	214	210	212
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	< 0.0084	< 0.0094	< 0.0094
Vanadium	mg/L	**0.0082**	NS	0.0059	**0.0086**	**0.0105**	0.0077	0.0079	0.0076	**0.0105**	**0.0096**	**0.0098**	0.0077
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.0047 J	< 0.0042	< 0.0054	< 0.0054
Metals													
Cyanide	mg/L	0.2	NS								< 0.0050	< 0.0050	< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS								< 0.000081	< 0.000080	< 0.000081

Table 6
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East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BD 18-Dec-08 N	MW-BD 19-Mar-09 N	MW-BD 11-Jun-09 N	MW-BD 24-Sep-09 N	MW-BD 16-Dec-09 N	MW-BD 07-Jan-11 N	MW-BD 19-Aug-13 N	MW-BD 31-May-16 N	MW-BD 19-Oct-16 N	MW-BD 10-Jan-17 N
Aroclor 1221	mg/L	0.0017	0.053								< 0.000081	< 0.000080	< 0.000081
Aroclor 1232	mg/L	0.0017	0.055								< 0.00016	< 0.00016	< 0.00016
Aroclor 1242	mg/L	0.0017	NS								< 0.000081	< 0.000080	< 0.000081
Aroclor 1248	mg/L	0.0017	NS								< 0.000081	< 0.000080	< 0.000081
Aroclor 1254	mg/L	0.0017	NS								< 0.000081	< 0.000080	< 0.000081
Aroclor 1260	mg/L	0.0017	NS								< 0.00012	< 0.00012	< 0.00012
Total PCBs	mg/L	0.0005	NS								< 0.000081	< 0.000080	< 0.000081
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.02	< 0.021	< 0.021	< 0.02	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	0.002 J	0.001 J	< 0.001	0.003 J	< 0.0005	0.002	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0005 J
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.053**	**0.047**	**0.051**	**0.06**	**0.068**	**0.062**	**0.04**	**0.045**	**0.048**	**0.056**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	0.032	0.027	0.02	0.021	0.021	0.014 J	0.006 J	0.009 J	0.01 J	0.007 J
Benzene	mg/L	0.005	0.35	0.001 J	0.002 J	0.004 J	0.003 J	0.003 J	0.002 J	0.0008 J	0.0009 J	0.0007 J	0.0007 J

Table 6
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East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BD 18-Dec-08 N	MW-BD 19-Mar-09 N	MW-BD 11-Jun-09 N	MW-BD 24-Sep-09 N	MW-BD 16-Dec-09 N	MW-BD 07-Jan-11 N	MW-BD 19-Aug-13 N	MW-BD 31-May-16 N	MW-BD 19-Oct-16 N	MW-BD 10-Jan-17 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	0.002 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS								< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290								< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS								< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS								< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13								< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	0.002 J	0.002 J	< 0.0007	< 0.0007	0.001 J	0.001 J	0.001 J	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0006 J
Xylenes	mg/L	10	12	0.001 J	0.001 J	< 0.0008	< 0.0008	0.002 J	0.001 J	< 0.0008	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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East 10th Street Site
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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 Z					
General Parameters													
Sulfate	mg/L	NS	NS					513					
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS					39.9					
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS					3.2					
Metals, Dissolved													
Aluminum	mg/L	NS	NS	0.175 J	0.164 J	0.260	0.115 J	0.215	< 0.0398	< 0.0802	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0087	0.00060 J	0.00077 J	0.00073 J	< 0.0092	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0097	**0.0206**	**0.0177 J**	**0.0163 J**	**0.0209**	< 0.0094	< 0.01	< 0.0100	< 0.0102	< 0.0100
Barium	mg/L	2	NS	0.0451	0.0459	0.0470	0.0423	0.0457	0.119	0.0712	0.0717	0.0792	0.0653
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00097	< 0.00094	< 0.00090	< 0.00090	< 0.00090
Cadmium	mg/L	**0.005**	NS	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00076	< 0.00091	< 0.00090	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	85.3	83.6	89.7	83.7	85.2	316	90.6	92.2	86.3	80.8
Chromium	mg/L	**0.1**	NS	0.0023 J	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0030	< 0.0023	< 0.0023	< 0.0030	< 0.0030
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	0.0039 J	< 0.0021	< 0.0021	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0041	0.0041 J	< 0.0040	< 0.0040	< 0.0040	0.0046 J	< 0.0022	< 0.0022	< 0.0027	< 0.0027
Iron	mg/L	NS	NS	< 0.0747	< 0.0805	< 0.0805	< 0.0805	< 0.0805	411	9.66	< 0.0522	17.3	13.2
Lead	mg/L	**0.005**	NS	< 0.0062	< 0.0060	< 0.00011	< 0.00011	< 0.00011	< 0.0100	< 0.0069	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	0.479	0.424	0.513	0.689	0.840	144	23.7	23.0	23.1	20.2
Manganese	mg/L	**0.3**	NS	< 0.0018	< 0.0016	< 0.0016	0.0038 J	0.0035 J	**9.05**	**0.622**	0.0018 J	**0.714**	**0.505**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	0.000055 J	< 0.000028	< 0.000056	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0051	< 0.0056	< 0.0056	< 0.0056	< 0.0056
Potassium	mg/L	NS	NS	8.65	8.23	9.27	8.20	8.10	22.9	14.6	9.89	10.4	12.7
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0059	< 0.0094	< 0.0094	< 0.0107	< 0.0107
Silver	mg/L	0.1	NS	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0020	< 0.0016	< 0.0016	< 0.0022	< 0.0022
Sodium	mg/L	NS	NS	221	209	222	216	220	1,020	36.4	33.5	41.0	32.0
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	**0.0106 J**	< 0.0135	< 0.0105	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	**0.0086**	**0.0089**	0.0074	0.0048 J	0.0049 J	< 0.0016	< 0.0015	< 0.0015	< 0.0025	< 0.0025
Zinc	mg/L	**2**	NS	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	< 0.0048	< 0.0081	< 0.0081	< 0.0081	< 0.0081
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050									
Metals, Total													
Iron	mg/L	NS	NS					0.236					
Manganese	mg/L	**0.3**	NS					0.0035 J					
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000081					< 0.000098	< 0.000097			

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000081					< 0.00017	< 0.000097			
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016					< 0.000098	< 0.000097			
Aroclor 1242	mg/L	0.0017	NS	< 0.000081					< 0.000098	< 0.000097			
Aroclor 1248	mg/L	0.0017	NS	< 0.000081					< 0.000098	< 0.000097			
Aroclor 1254	mg/L	0.0017	NS	< 0.000081					< 0.000098	< 0.000097			
Aroclor 1260	mg/L	0.0017	NS	< 0.00012					< 0.000098	< 0.000097			
Total PCBs	mg/L	0.0005	NS	< 0.000081									
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.019	< 0.02	< 0.021	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0004 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BD 28-Mar-17 N	MW-BD 15-Aug-17 N	MW-BD 31-Oct-17 N	MW-BD 09-Jan-18 N	MW-BD 24-Apr-18 N	MW-BS 01-Jun-04 N	MW-BS 11-Jan-07 N	MW-BS 13-Mar-08 N	MW-BS 19-Jun-08 N	MW-BS 18-Dec-08 N
Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0007	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	0.0009 J	0.001	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	0.0005 J	< 0.0005	0.0005 J	0.002 J	0.002 J	0.001 J	0.001 J	0.001 J
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.066**	**0.065**	**0.077**	**0.06**	**0.088**	**0.012**	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	0.01 J	< 0.006	0.006 J	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	0.0008 J	0.0008 J	0.0006 J	0.0006 J	0.0006 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05					
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001					
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002					
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1					
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004					
Toluene	mg/L	1	430	< 0.0005	0.002	< 0.0005	< 0.0005	0.0009 J	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	0.0006 J	< 0.0005	< 0.0005	0.001	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BD 28-Mar-17 N	MW-BD 15-Aug-17 N	MW-BD 31-Oct-17 N	MW-BD 09-Jan-18 N	MW-BD 24-Apr-18 N	MW-BS 01-Jun-04 N	MW-BS 11-Jan-07 N	MW-BS 13-Mar-08 N	MW-BS 19-Jun-08 N	MW-BS 18-Dec-08 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BS 19-Mar-09 N	MW-BS 11-Jun-09 N	MW-BS 24-Sep-09 N	MW-BS 16-Dec-09 N	MW-BS 07-Jan-11 N	MW-BS 19-Aug-13 N	MW-BS 31-May-16 N	MW-BS 19-Oct-16 N	MW-BS 10-Jan-17 N	MW-BS 28-Mar-17 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000							< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077
Arsenic	mg/L	**0.01**	NS	< 0.0100	< 0.0072	< 0.0072	< 0.0072	< 0.0098	< 0.0068	< 0.0078	< 0.0097	< 0.0097	< 0.0097
Barium	mg/L	2	NS	0.0711	0.0846	0.0712	0.0845	0.0676	0.0907	0.0748	0.0827	0.112	0.0763
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00076	< 0.00064	< 0.00049	< 0.00049	< 0.00049
Calcium	mg/L	NS	NS	91.1	95.2	90.7	94.7	77.8	84.9	93.0	86.0	82.2	92.2
Chromium	mg/L	**0.1**	NS	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0016	< 0.0020	< 0.0018	< 0.0018	0.0021 J
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0023	< 0.0013	< 0.00090	< 0.0019	< 0.0019	< 0.0019
Copper	mg/L	1	NS	0.0034 J	0.0028 J	< 0.0027	< 0.0027	< 0.0027	< 0.0027	0.0042 J	< 0.0041	< 0.0041	< 0.0041
Iron	mg/L	NS	NS	15.3	17.3	14.3	14.6	12.4	11.6	12.3	7.58	10.7	12.3
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051	< 0.0062	< 0.0062	< 0.0062
Magnesium	mg/L	NS	NS	22.7	23.3	22.0	23.7	19.1	19.1	19.3	18.5	18.8	19.1
Manganese	mg/L	**0.3**	NS	**0.560**	**0.700**	**0.552**	**0.654**	**0.511**	**0.541**	**0.525**	**0.537**	**0.549**	**0.535**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0056	< 0.0018	< 0.0018	< 0.0018	< 0.0030	< 0.0015	< 0.0025	< 0.0028	< 0.0028	< 0.0028
Potassium	mg/L	NS	NS	10.5	10.8	11.7	12.3	10.2	10.3	10.5	10.3	10.5	10.9
Selenium	mg/L	**0.05**	NS	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Silver	mg/L	0.1	NS	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018	< 0.0019	< 0.0019	< 0.0019
Sodium	mg/L	NS	NS	32.7	38.5	30.5	36.3	29.4	24.5	22.5	24.6	24.7	22.7
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0094
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.0036 J	0.0057 J	< 0.0054	< 0.0054	< 0.0054
Metals													
Cyanide	mg/L	0.2	NS							< 0.0050	< 0.0050	< 0.0050	< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS							< 0.000081	< 0.000081	< 0.000081	< 0.000081

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BS 19-Mar-09 N	MW-BS 11-Jun-09 N	MW-BS 24-Sep-09 N	MW-BS 16-Dec-09 N	MW-BS 07-Jan-11 N	MW-BS 19-Aug-13 N	MW-BS 31-May-16 N	MW-BS 19-Oct-16 N	MW-BS 10-Jan-17 N	MW-BS 28-Mar-17 N
Aroclor 1221	mg/L	0.0017	0.053							< 0.000081	< 0.000081	< 0.000081	< 0.000081
Aroclor 1232	mg/L	0.0017	0.055							< 0.00016	< 0.00016	< 0.00016	< 0.00016
Aroclor 1242	mg/L	0.0017	NS							< 0.000081	< 0.000081	< 0.000081	< 0.000081
Aroclor 1248	mg/L	0.0017	NS							< 0.000081	< 0.000081	< 0.000081	< 0.000081
Aroclor 1254	mg/L	0.0017	NS							< 0.000081	< 0.000081	< 0.000081	< 0.000081
Aroclor 1260	mg/L	0.0017	NS							< 0.00012	< 0.00012	< 0.00012	< 0.00012
Total PCBs	mg/L	0.0005	NS							< 0.000081	< 0.000081	< 0.000081	< 0.000081
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.02	< 0.019	< 0.019	< 0.021	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.009	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

Table 6
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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	0.0001 J	0.0001 J	0.0001 J	0.0001 J	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.001 J	0.001 J	0.001 J	0.001 J	0.002 J	0.001 J	0.001	0.001	0.001	0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS							< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290							< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS							< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS							< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13							< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BS 15-Aug-17 N	MW-BS 31-Oct-17 N	MW-BS 09-Jan-18 N	MW-BS 24-Apr-18 N	MW-C3 06-Jun-16 N	MW-C3 21-Oct-16 N	MW-C3 13-Jan-17 N	MW-C3 06-Apr-17 N	MW-C3 28-Aug-17 N	MW-C3 02-Nov-17 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0 Z	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0894	< 0.0894	< 0.0894	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0096	< 0.0096	< 0.0096	**0.0106 J**	**0.0114 J**	**0.0136 J**	< 0.0097	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.0839	0.105	0.544	0.361	0.0452	0.0354	0.0275	0.0062	0.0043 J	0.0109
Beryllium	mg/L	**0.004**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00064	< 0.00049	< 0.00049	< 0.00049	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	91.9	97.3	158	115	79.1	77.5	101	28.9	24.8	41.2
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0020	< 0.0018	0.0021 J	< 0.0018	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017
Copper	mg/L	1	NS	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0032	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040
Iron	mg/L	NS	NS	9.55	5.06	27.2	21.2	11.1	9.96	7.58	0.768	< 0.0805	1.50
Lead	mg/L	**0.005**	NS	< 0.0060	0.00040 J	< 0.00011	< 0.00011	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060	< 0.00011
Magnesium	mg/L	NS	NS	19.7	21.7	38.7	29.1	14.2	13.0	18.8	8.60	7.90	7.92
Manganese	mg/L	**0.3**	NS	**0.547**	**0.622**	**2.16**	**1.55**	**0.493**	**0.434**	**0.468**	0.106	0.0835	0.163
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	0.000051 J	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040
Potassium	mg/L	NS	NS	10.0	12.0	12.5	11.2	17.0	16.1	18.5	49.9	51.8	24.7
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	0.0104 J
Silver	mg/L	0.1	NS	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	23.7	32.8	129	85.9	188	188	198	176	169	158
Thallium	mg/L	**0.002**	NS	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0023	< 0.0016	0.0017 J	< 0.0016	0.0016 J	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0065	< 0.0065	< 0.0065	< 0.0042	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS					< 0.0050	< 0.0050	< 0.0050	< 0.0050		
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS					< 0.000083	< 0.000081	< 0.000080	< 0.000081		

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BS 15-Aug-17 N	MW-BS 31-Oct-17 N	MW-BS 09-Jan-18 N	MW-BS 24-Apr-18 N	MW-C3 06-Jun-16 N	MW-C3 21-Oct-16 N	MW-C3 13-Jan-17 N	MW-C3 06-Apr-17 N	MW-C3 28-Aug-17 N	MW-C3 02-Nov-17 N
Aroclor 1221	mg/L	0.0017	0.053					< 0.000083	< 0.000081	< 0.000080	< 0.000081		
Aroclor 1232	mg/L	0.0017	0.055					< 0.00017	< 0.00016	< 0.00016	< 0.00016		
Aroclor 1242	mg/L	0.0017	NS					< 0.000083	< 0.000081	< 0.000080	< 0.000081		
Aroclor 1248	mg/L	0.0017	NS					< 0.000083	< 0.000081	< 0.000080	< 0.000081		
Aroclor 1254	mg/L	0.0017	NS					< 0.000083	< 0.000081	< 0.000080	< 0.000081		
Aroclor 1260	mg/L	0.0017	NS					< 0.00012	< 0.00012	< 0.00012	< 0.00012		
Total PCBs	mg/L	0.0005	NS					< 0.000083	< 0.000081	< 0.000080	< 0.000081		
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	**0.017**	< 0.0005	< 0.0005	**0.007**
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.00041	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	0.0003 J	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0051	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0051	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	0.0003 J	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.00011 J	0.0002 J	< 0.0001	< 0.0001	0.0001 J
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	0.0001 J	< 0.0001	< 0.0001	0.0001 J	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.001	0.0009 J	0.001	0.0007 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	0.003	0.001	**0.011**	**0.009**	**0.008**	0.006	0.005	0.006
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	0.005 J	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	0.016 J	< 0.006	< 0.006	0.019 J	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BS 15-Aug-17 N	MW-BS 31-Oct-17 N	MW-BS 09-Jan-18 N	MW-BS 24-Apr-18 N	MW-C3 06-Jun-16 N	MW-C3 21-Oct-16 N	MW-C3 13-Jan-17 N	MW-C3 06-Apr-17 N	MW-C3 28-Aug-17 N	MW-C3 02-Nov-17 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.017	0.004 J	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	0.0006 J	< 0.0005	< 0.0005	< 0.0005	0.007	< 0.0005	< 0.0005	< 0.0005	0.0008 J	0.0006 J
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-BS 15-Aug-17 N	MW-BS 31-Oct-17 N	MW-BS 09-Jan-18 N	MW-BS 24-Apr-18 N	MW-C3 06-Jun-16 N	MW-C3 21-Oct-16 N	MW-C3 13-Jan-17 N	MW-C3 06-Apr-17 N	MW-C3 28-Aug-17 N	MW-C3 02-Nov-17 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0 Z								
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0894	< 0.0398	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	0.00078 J	0.00048 J	< 0.0092	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0096	< 0.0094	< 0.01	< 0.0100	< 0.0102	< 0.0100	< 0.0100	< 0.0072	< 0.0072
Barium	mg/L	2	NS	0.0042 J	0.0085	0.0226	0.0170	0.0173	0.0180	0.0193	0.0183	0.0191	0.0170
Beryllium	mg/L	**0.004**	NS	< 0.0020	< 0.0020	< 0.00097	< 0.00094	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0018	< 0.00076	< 0.00091	< 0.00090	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	28.5	36.4	610	696	577	727	702	702	609	662
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0033	< 0.0030	< 0.0023	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0017	< 0.0020	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0040	< 0.0040	< 0.0027	< 0.0022	< 0.0022	< 0.0027	0.0058 J	0.0190	< 0.0027	0.0114
Iron	mg/L	NS	NS	< 0.0805	0.399	41.7	22	19.5	20.5	22.1	23.8	26.5	23.8
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.00011	< 0.0100	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	7.76	6.56	132	142	139	146	149	150	155	142
Manganese	mg/L	**0.3**	NS	0.0959	0.116	**2.43**	**2.36**	**2.10**	**2.09**	**2.43**	**2.32**	**2.56**	**2.33**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000028	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	< 0.0040	< 0.0040	< 0.0051	< 0.0056	< 0.0056	< 0.0056	< 0.0056	< 0.0056	< 0.0018	< 0.0018
Potassium	mg/L	NS	NS	47.4	24.6	13.1	10.8	11.0	16.0	20.1	10.2	11.6	10.4
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0093	< 0.0059	< 0.0094	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089
Silver	mg/L	0.1	NS	< 0.0024	< 0.0024	< 0.0020	< 0.0016	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023
Sodium	mg/L	NS	NS	174	168	153	211	244	241	262	250	265	252
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.00012	< 0.0099	< 0.0135	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	< 0.0015	< 0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0065	< 0.0048	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081
Metals													
Cyanide	mg/L	0.2	NS										
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS			< 0.00010	< 0.000099						

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Aroclor 1221	mg/L	0.0017	0.053			< 0.00017	< 0.000099						
Aroclor 1232	mg/L	0.0017	0.055			< 0.00010	< 0.000099						
Aroclor 1242	mg/L	0.0017	NS			< 0.00010	< 0.000099						
Aroclor 1248	mg/L	0.0017	NS			< 0.00010	< 0.000099						
Aroclor 1254	mg/L	0.0017	NS			< 0.00010	< 0.000099						
Aroclor 1260	mg/L	0.0017	NS			< 0.00010	< 0.000099						
Total PCBs	mg/L	0.0005	NS										
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.02	< 0.02	< 0.021	< 0.021	< 0.02	< 0.02	< 0.02	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	0.004 J	0.007	0.006	0.006	0.005	0.007	0.007	0.005
1,1-Dichloroethene	mg/L	**0.007**	3.8	0.003	0.004	**0.42**	**0.59**	**0.49**	**0.71 E**	**0.42**	**0.53**	**0.54**	**0.52**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	0.002 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05								
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001								
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002								
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1								
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004								
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0007	< 0.0007	0.002 J	< 0.0007	0.001 J	0.001 J	< 0.0007	0.0009 J
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0008	0.001 J	0.0009 J	< 0.0008	0.001 J	0.001 J	0.001 J	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	0.001 J	**0.003 J**	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J	0.002 J
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0008	< 0.0008	0.003 J	< 0.0008	0.003 J	0.001 J	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000					< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	0.342	< 0.0828	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	0.398
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0100	< 0.0053	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045
Arsenic	mg/L	**0.01**	NS	< 0.0072	< 0.0098	0.0094 J	**0.0132 J**	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.0167	0.0164	0.0181	0.0175	0.0158	0.0161	0.0155	0.0160	0.0170	0.0181
Beryllium	mg/L	**0.004**	NS	< 0.0014	< 0.0014	< 0.00067	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0020	**0.0128**	< 0.00076	< 0.00076	< 0.00064	0.0024 J	0.0012 J	< 0.00049	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	656	396	614	615	561	542	552	528	543	549
Chromium	mg/L	**0.1**	NS	< 0.0034	0.0124 J	0.0032 J	0.0029 J	< 0.0020	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0021	**0.0887**	< 0.0013	< 0.0013	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0027	< 0.0027	0.0132	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040
Iron	mg/L	NS	NS	24.3	428	45.6	44.3	58.3	57.4	50.9	52.4	52.7	49.2
Lead	mg/L	**0.005**	NS	< 0.0069	**0.0188**	< 0.0047	< 0.0047	< 0.0051	**0.0069 J**	< 0.0062	< 0.0062	< 0.0060	0.00022 J
Magnesium	mg/L	NS	NS	143	342	159	157	137	131	121	121	119	113
Manganese	mg/L	**0.3**	NS	**2.28**	**43.6**	**3.12**	**3.05**	**3.33**	**3.37**	**2.81**	**2.89**	**2.94**	**2.82**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000050	< 0.00006	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0020 J	**0.106**	< 0.0015	< 0.0015	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040
Potassium	mg/L	NS	NS	10.0	23.3	10.6	10.5	10.0	10.3	9.28	9.65	10.0	9.44
Selenium	mg/L	**0.05**	NS	< 0.0089	0.0248	< 0.0084	< 0.0084	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	0.0112 J
Silver	mg/L	0.1	NS	< 0.0023	0.0102	< 0.0021	< 0.0021	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	243	428	352	350	391	389	360	374	374	351
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0054	< 0.0054	**0.0190 J**	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0025	0.0041 J	< 0.002	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0081	0.0205	0.0028 J	0.0026 J	0.0049 J	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS					< 0.0050	< 0.0050	< 0.0050	< 0.0050		
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS					< 0.000083	< 0.000082	< 0.000081	< 0.000081		

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Aroclor 1221	mg/L	0.0017	0.053					< 0.000083	< 0.000082	< 0.000081	< 0.000081		
Aroclor 1232	mg/L	0.0017	0.055					< 0.00017	< 0.00016	< 0.00016	< 0.00016		
Aroclor 1242	mg/L	0.0017	NS					< 0.000083	< 0.000082	< 0.000081	< 0.000081		
Aroclor 1248	mg/L	0.0017	NS					< 0.000083	< 0.000082	< 0.000081	< 0.000081		
Aroclor 1254	mg/L	0.0017	NS					< 0.000083	< 0.000082	< 0.000081	< 0.000081		
Aroclor 1260	mg/L	0.0017	NS					< 0.00012	< 0.00012	< 0.00012	< 0.00012		
Total PCBs	mg/L	0.0005	NS					< 0.000083	< 0.000082	< 0.000081	< 0.000081		
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.00040	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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East 10th Street Site
Marcus Hook, Pennsylvania

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.006	0.007	0.005 J	0.005 J	0.004	0.004	0.004	0.004	0.004	0.003
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.52**	**0.64**	**0.33**	**0.36**	**0.3**	**0.28**	**0.28**	**0.29**	**0.3**	**0.3**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CD 22-Dec-09 N	MW-CD 10-Jan-11 N	MW-CD 22-Aug-13 N	MW-CD 22-Aug-13 FD	MW-CD 02-Jun-16 N	MW-CD 21-Oct-16 N	MW-CD 13-Jan-17 N	MW-CD 06-Apr-17 N	MW-CD 28-Aug-17 N	MW-CD 02-Nov-17 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290					< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
n-Butyl acetate	mg/L	NS	NS					< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS					< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13					< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	0.001 J	0.0008 J	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.001 J	0.001 J	0.002 J	0.002 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	0.002 J	0.002 J	0.002 J	0.002 J	0.001	0.001	0.001	0.001	0.002	0.002
Xylenes	mg/L	10	12	0.002 J	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CD 22-Dec-09 N	MW-CD 10-Jan-11 N	MW-CD 22-Aug-13 N	MW-CD 22-Aug-13 FD	MW-CD 02-Jun-16 N	MW-CD 21-Oct-16 N	MW-CD 13-Jan-17 N	MW-CD 06-Apr-17 N	MW-CD 28-Aug-17 N	MW-CD 02-Nov-17 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CD 19-Jan-18 N	MW-CD 23-Apr-18 N	MW-CDD 13-Jan-11 N	MW-CDD 21-Aug-13 N	MW-CDD 02-Jun-16 N	MW-CDD 24-Oct-16 N	MW-CDD 13-Jan-17 N	MW-CDD 06-Apr-17 N	MW-CDD 28-Aug-17 N	MW-CDD 02-Nov-17 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0 Z			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS		2,410								
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS		139								
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS		5.5								
Metals, Dissolved													
Aluminum	mg/L	NS	NS	2.02	< 0.0894	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894
Antimony	mg/L	**0.006**	NS	0.00057 J	< 0.00045	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0096	< 0.0098	**0.0237**	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.0273	0.0174	0.0287	0.0247	0.0191	0.0176	0.0155	0.0182	0.0169	0.0157
Beryllium	mg/L	**0.004**	NS	< 0.0020	< 0.0020	< 0.0014	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0018	< 0.0020	0.001 J	< 0.00064	< 0.00049	0.0011 J	< 0.00049	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	591	553	651	624	507	481	491	543	513	482
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0033	< 0.0034	0.0031 J	< 0.0020	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0017	< 0.0023	0.0014 J	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017
Copper	mg/L	1	NS	< 0.0040	< 0.0040	0.0133	< 0.0027	0.0137	0.0055 J	< 0.0041	< 0.0041	< 0.0040	< 0.0040
Iron	mg/L	NS	NS	26.5	46.4	122	132	24.2	39.5	48.6	103	68.7	73.8
Lead	mg/L	**0.005**	NS	0.00081 J	< 0.00011	**0.0073 J**	**0.0094 J**	< 0.0051	< 0.0062	< 0.0062	**0.0067 J**	< 0.0060	< 0.00011
Magnesium	mg/L	NS	NS	129	117	145	149	95.8	101	106	125	105	104
Manganese	mg/L	**0.3**	NS	**2.73**	**2.86**	**4.53**	**4.46**	**2.17**	**2.24**	**2.50**	**3.71**	**3.02**	**3.06**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0040	< 0.0040	0.0055 J	< 0.0015	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040
Potassium	mg/L	NS	NS	11.6	10.0	11.9	9.23	32.4	24.5	22.4	19.2	21.1	18.4
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0093	< 0.0089	< 0.0084	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	0.0130 J
Silver	mg/L	0.1	NS	< 0.0024	< 0.0024	< 0.0023	< 0.0021	< 0.0018	0.0026 J	< 0.0019	< 0.0019	< 0.0024	0.0026 J
Sodium	mg/L	NS	NS	373	374	465	465	543	545	596	600	607	554
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.00012	< 0.0140	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0025	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0065	< 0.0081	< 0.002	0.0055 J	< 0.0054	< 0.0054	< 0.0054	0.0070 J	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS					< 0.0050	< 0.0050	< 0.0050	< 0.0050		
Metals, Total													
Iron	mg/L	NS	NS		58.5								
Manganese	mg/L	**0.3**	NS		**2.99**								
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS					< 0.000081	< 0.000083	< 0.000081	< 0.000083		

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Aroclor 1221	mg/L	0.0017	0.053					< 0.000081	< 0.000083	< 0.000081	< 0.000083		
Aroclor 1232	mg/L	0.0017	0.055					< 0.00016	< 0.00017	< 0.00016	< 0.00017		
Aroclor 1242	mg/L	0.0017	NS					< 0.000081	< 0.000083	< 0.000081	< 0.000083		
Aroclor 1248	mg/L	0.0017	NS					< 0.000081	< 0.000083	< 0.000081	< 0.000083		
Aroclor 1254	mg/L	0.0017	NS					< 0.000081	< 0.000083	< 0.000081	< 0.000083		
Aroclor 1260	mg/L	0.0017	NS					< 0.00012	< 0.00012	< 0.00012	< 0.00012		
Total PCBs	mg/L	0.0005	NS					< 0.000081	< 0.000083	< 0.000081	< 0.000083		
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	0.001	0.0014	0.001	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.002	< 0.0004	< 0.0004	< 0.00041	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0051	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0051	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.001	< 0.0005	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00051	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.002	0.003	0.006	0.005	0.004	0.003	0.003	0.003	0.003	0.003
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.14**	**0.33**	**0.41**	**0.36**	**0.29**	**0.26**	**0.24**	**0.28**	**0.25**	**0.26**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05	< 0.05			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002			< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004			< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0005	< 0.0005	0.0007 J	< 0.0007	0.004	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	0.001 J	0.003 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	0.0008 J	0.002	0.002 J	0.002 J	0.0006 J	0.0008 J	0.0008 J	0.001	0.001	0.001
Xylenes	mg/L	10	12	< 0.0005	0.0005 J	< 0.0008	0.001 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CD 19-Jan-18 N	MW-CD 23-Apr-18 N	MW-CDD 13-Jan-11 N	MW-CDD 21-Aug-13 N	MW-CDD 02-Jun-16 N	MW-CDD 24-Oct-16 N	MW-CDD 13-Jan-17 N	MW-CDD 06-Apr-17 N	MW-CDD 28-Aug-17 N	MW-CDD 02-Nov-17 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CDD 19-Jan-18 N	MW-CDD 23-Apr-18 N	MW-CS 01-Jun-04 N	MW-CS 12-Jan-07 N	MW-CS 13-Mar-08 N	MW-CS 20-Jun-08 N	MW-CS 29-Dec-08 N	MW-CS 20-Mar-09 N	MW-CS 12-Jun-09 N	MW-CS 25-Sep-09 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0 Z								
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0894	< 0.0398	< 0.0802	< 0.0802	0.269	< 0.0802	0.105 J	0.142 J	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.00045	< 0.00045	< 0.0092	< 0.0097	**0.010 J**	< 0.0097	**0.0102 J**	**0.0182 J**	< 0.0097	**0.0138 J**
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0096	< 0.0094	< 0.01	< 0.0100	< 0.0102	< 0.0100	< 0.0100	< 0.0072	**0.0224**
Barium	mg/L	2	NS	0.0167	0.0163	0.0213	0.0201	0.0194	0.0321	0.0200	0.0208	0.0288	0.0180
Beryllium	mg/L	**0.004**	NS	< 0.0020	< 0.0020	< 0.00097	< 0.00094	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0018	< 0.00076	< 0.00091	**0.0117**	< 0.0100	< 0.0100	< 0.0020	0.0023 J	**0.0059**
Calcium	mg/L	NS	NS	535	513	543	407	380	404	429	427	426	421
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0033	< 0.0030	< 0.0023	< 0.0023	< 0.0030	< 0.0030	0.0035 J	0.0052 J	< 0.0034
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0017	**0.0502**	**0.104**	**0.0706**	**0.0833**	**0.0989**	**0.0753**	**0.0798**	**0.0710**
Copper	mg/L	1	NS	< 0.0200	< 0.0040	0.0044 J	0.0047 J	0.0046 J	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027
Iron	mg/L	NS	NS	92.2	84.1	494	534	547	549	471	515	507	510
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.00011	< 0.0100	< 0.0069	< 0.0069	< 0.0345	< 0.0345	**0.0185**	**0.0161**	< 0.0069
Magnesium	mg/L	NS	NS	119	112	424	384	337	386	367	387	385	372
Manganese	mg/L	**0.3**	NS	**3.33**	**3.26**	**41.9**	**41.1**	**37.5**	**46.8**	**38.3**	**37.8**	**40.0**	**36.4**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000028	< 0.000056	< 0.000056	< 0.000056	< 0.00028	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	< 0.0040	< 0.0040	0.0557	**0.146**	0.100	**0.127**	**0.162**	**0.107**	**0.113**	0.0880
Potassium	mg/L	NS	NS	20.8	19.9	63.6	34.8	34.3	49.9	50.9	31.1	30.2	31.2
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0093	< 0.0059	< 0.0094	0.0107 J	< 0.0107	< 0.0535	0.0113 J	0.0152 J	< 0.0089
Silver	mg/L	0.1	NS	< 0.0024	< 0.0024	< 0.0020	0.0110	0.0018 J	< 0.0022	0.0156	< 0.0022	0.0057	0.0045 J
Sodium	mg/L	NS	NS	620	590	417	453	388	466	475	437	460	451
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.00012	**0.0418**	< 0.0135	< 0.0105	< 0.0140	**0.0989**	< 0.140	< 0.0140	**0.0655**
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	0.0042 J	< 0.0015	< 0.0125	< 0.0025	< 0.0025	< 0.0025	< 0.0125
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0065	< 0.0048	< 0.0081	< 0.0081	0.0198 J	< 0.0405	< 0.0081	< 0.0081	0.0161 J
Metals													
Cyanide	mg/L	0.2	NS										
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS			< 0.00010	< 0.000097						

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CDD 19-Jan-18 N	MW-CDD 23-Apr-18 N	MW-CS 01-Jun-04 N	MW-CS 12-Jan-07 N	MW-CS 13-Mar-08 N	MW-CS 20-Jun-08 N	MW-CS 29-Dec-08 N	MW-CS 20-Mar-09 N	MW-CS 12-Jun-09 N	MW-CS 25-Sep-09 N
Aroclor 1221	mg/L	0.0017	0.053			< 0.00017	< 0.000097						
Aroclor 1232	mg/L	0.0017	0.055			< 0.00010	< 0.000097						
Aroclor 1242	mg/L	0.0017	NS			< 0.00010	< 0.000097						
Aroclor 1248	mg/L	0.0017	NS			< 0.00010	< 0.000097						
Aroclor 1254	mg/L	0.0017	NS			< 0.00010	< 0.000097						
Aroclor 1260	mg/L	0.0017	NS			< 0.00010	< 0.000097						
Total PCBs	mg/L	0.0005	NS										
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0009	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.019	< 0.02	< 0.021	< 0.021	< 0.02	< 0.022	< 0.021	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0009	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.0009	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0009	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.009	< 0.01	< 0.01	< 0.011	< 0.01	< 0.011	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.003	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.25**	**0.29**	**0.021**	0.002 J	0.004 J	0.003 J	0.002 J	0.003 J	0.003 J	0.002 J
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	0.011 J	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CDD 19-Jan-18 N	MW-CDD 23-Apr-18 N	MW-CS 01-Jun-04 N	MW-CS 12-Jan-07 N	MW-CS 13-Mar-08 N	MW-CS 20-Jun-08 N	MW-CS 29-Dec-08 N	MW-CS 20-Mar-09 N	MW-CS 12-Jun-09 N	MW-CS 25-Sep-09 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05								
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001								
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002								
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1								
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004								
Toluene	mg/L	1	430	< 0.0005	< 0.0005	0.038	< 0.0007	0.001 J	< 0.0007	0.001 J	0.0009 J	< 0.0007	0.0009 J
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/L	**0.002**	0.052	0.002	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0008	< 0.0008	0.001 J	< 0.0008	0.001 J	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CDD 19-Jan-18 N	MW-CDD 23-Apr-18 N	MW-CS 01-Jun-04 N	MW-CS 12-Jan-07 N	MW-CS 13-Mar-08 N	MW-CS 20-Jun-08 N	MW-CS 29-Dec-08 N	MW-CS 20-Mar-09 N	MW-CS 12-Jun-09 N	MW-CS 25-Sep-09 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
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Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CS 22-Dec-09 N	MW-CS 10-Jan-11 N	MW-CS 20-Aug-13 N	MW-CS 02-Jun-16 N	MW-CS 24-Oct-16 N	MW-CS 13-Jan-17 N	MW-CS 06-Apr-17 N	MW-CS 28-Aug-17 N	MW-CS 02-Nov-17 N	MW-CS 19-Jan-18 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	0.0990 J	0.0923 J	0.383	0.137 J	0.0952 J	< 0.0868	0.135 J	< 0.0894	1.84
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0100	< 0.0053	**0.0095 J**	**0.0084 J**	< 0.0077	< 0.0077	**0.0156 J**	< 0.00045	< 0.00045
Arsenic	mg/L	**0.01**	NS	< 0.0072	< 0.0098	< 0.0068	< 0.0078	< 0.0097	< 0.0485	< 0.0485	**0.0111 J**	< 0.0480	**0.0426**
Barium	mg/L	2	NS	0.0183	0.0151	0.0185	0.0284	0.0165	0.0143	0.0171	0.0177	0.0147	0.0389
Beryllium	mg/L	**0.004**	NS	< 0.0014	< 0.0014	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	**0.0196**	< 0.0020	0.0033 J	< 0.0032	< 0.00049	0.0050 J	< 0.00049	< 0.0018	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	433	815	395	324	341	304	290	356	349	237
Chromium	mg/L	**0.1**	NS	0.0038 J	< 0.0034	0.0043 J	0.0030 J	0.0058 J	< 0.0018	< 0.0018	< 0.0033	< 0.0033	0.0060 J
Cobalt	mg/L	**0.035**	NS	**0.0825**	< 0.0023	**0.0659**	**0.0614**	**0.0449**	**0.0511**	**0.0513**	**0.0415**	0.0342	**0.0371**
Copper	mg/L	1	NS	< 0.0135	< 0.0027	< 0.0027	0.0168	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	0.0060 J
Iron	mg/L	NS	NS	507	24.3	422	324	371	335	333	371	357	271
Lead	mg/L	**0.005**	NS	**0.0081 J**	< 0.0069	**0.0102 J**	< 0.0051	< 0.0062	**0.0127 J**	**0.0142 J**	**0.0117 J**	< 0.00011	0.00035 J
Magnesium	mg/L	NS	NS	368	133	326	265	264	245	233	258	245	188
Manganese	mg/L	**0.3**	NS	**38.2**	**2.59**	**34.6**	**30.5**	**29.3**	**27.5**	**26.8**	**26.2**	**25.1**	**19.9**
Mercury	mg/L	0.002	NS	< 0.00056	< 0.000050	< 0.00006	0.000074 J	< 0.000050	< 0.000050	< 0.000050	< 0.000050	0.00042	< 0.000050
Nickel	mg/L	**0.1**	NS	**0.134**	< 0.0030	0.0893	0.0699	0.0468	0.0714	0.0697	0.0664	0.0423	0.0466
Potassium	mg/L	NS	NS	29.8	10.2	22.7	19.8	21.3	21.0	22.6	24.3	22.8	19.4
Selenium	mg/L	**0.05**	NS	0.0394	< 0.0089	< 0.0084	< 0.0485	< 0.0097	0.0211	0.0492 J	0.0223	**0.0590**	< 0.0093
Silver	mg/L	0.1	NS	0.0058	< 0.0023	< 0.0021	0.0019 J	0.0389	< 0.0019	< 0.0019	< 0.0024	0.0175	< 0.0120
Sodium	mg/L	NS	NS	449	232	456	475	417	428	447	459	402	371
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0054	**0.104**	**0.0377**	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012
Vanadium	mg/L	**0.0082**	NS	**0.0105**	< 0.0025	< 0.002	0.0044 J	0.0031 J	0.0049 J	< 0.0016	0.0034 J	0.0037 J	< 0.0080
Zinc	mg/L	**2**	NS	0.0283	< 0.0081	0.0634	0.0304	< 0.0054	< 0.0054	< 0.0054	0.0231	< 0.0065	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS				< 0.0050	< 0.0050	< 0.0050	< 0.0050			
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000081	< 0.000080			

Table 6
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CS 22-Dec-09 N	MW-CS 10-Jan-11 N	MW-CS 20-Aug-13 N	MW-CS 02-Jun-16 N	MW-CS 24-Oct-16 N	MW-CS 13-Jan-17 N	MW-CS 06-Apr-17 N	MW-CS 28-Aug-17 N	MW-CS 02-Nov-17 N	MW-CS 19-Jan-18 N
Aroclor 1221	mg/L	0.0017	0.053				< 0.000082	< 0.000081	< 0.000081	< 0.000080			
Aroclor 1232	mg/L	0.0017	0.055				< 0.00016	< 0.00016	< 0.00016	< 0.00016			
Aroclor 1242	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000081	< 0.000080			
Aroclor 1248	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000081	< 0.000080			
Aroclor 1254	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000081	< 0.000080			
Aroclor 1260	mg/L	0.0017	NS				< 0.00012	< 0.00012	< 0.00012	< 0.00012			
Total PCBs	mg/L	0.0005	NS				< 0.000082	< 0.000081	< 0.000081	< 0.000080			
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.00040	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	0.001 J	0.007	0.002 J	0.003	**0.008**	0.0009 J	0.003	0.002	0.007	0.002
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS				< 0.05	< 0.05	< 0.05	0.059 J	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290				< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
n-Butyl acetate	mg/L	NS	NS				< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS				< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13				< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	0.0008 J	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CS 22-Dec-09 N	MW-CS 10-Jan-11 N	MW-CS 20-Aug-13 N	MW-CS 02-Jun-16 N	MW-CS 24-Oct-16 N	MW-CS 13-Jan-17 N	MW-CS 06-Apr-17 N	MW-CS 28-Aug-17 N	MW-CS 02-Nov-17 N	MW-CS 19-Jan-18 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0 Z	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	0.119 J	0.121 J	< 0.0868	0.150 J	< 0.0868	0.109 J	< 0.0894	< 0.0894	< 0.0894	< 0.0398
Antimony	mg/L	**0.006**	NS	< 0.00045	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	0.0011	0.0012	0.0012	< 0.0092
Arsenic	mg/L	**0.01**	NS	**0.0106 J**	**0.0299**	**0.0200 J**	**0.0165 J**	< 0.0097	**0.0162 J**	**0.0117 J**	**0.0217**	**0.0101 J**	< 0.0094
Barium	mg/L	2	NS	0.0205	0.0127	0.0131	0.0114	0.0112	0.0100	0.0093	0.0086	0.0081	0.0173
Beryllium	mg/L	**0.004**	NS	< 0.0020	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00097
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.00064	< 0.00049	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00076
Calcium	mg/L	NS	NS	286	6.30	7.71	7.31	7.02	6.95	6.87	6.75	6.67	20.7
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0020	< 0.0018	0.0023 J	0.0024 J	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0030
Cobalt	mg/L	**0.035**	NS	**0.0433**	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	0.0057
Copper	mg/L	1	NS	0.0103	< 0.0032	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0027
Iron	mg/L	NS	NS	290	0.0626 J	0.0803 J	< 0.0747	< 0.0747	< 0.0805	< 0.0805	< 0.0805	< 0.0805	38.3
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060	0.00028 J	0.00028 J	0.00017 J	< 0.0100
Magnesium	mg/L	NS	NS	222	0.382	0.331	0.299	0.258	0.250	0.225	0.235	0.217	7.27
Manganese	mg/L	**0.3**	NS	**24.6**	0.0062	0.0035 J	0.0037 J	0.0025 J	0.0035 J	0.0031 J	0.0026 J	0.0046 J	**1.5**
Mercury	mg/L	0.002	NS	0.000067 J	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028
Nickel	mg/L	**0.1**	NS	0.0646	0.0039 J	0.0031 J	0.0033 J	0.0036 J	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0051
Potassium	mg/L	NS	NS	21.6	93.3	73.9	67.7	65.5	61.9	58.5	53.8	50.9	2.83
Selenium	mg/L	**0.05**	NS	< 0.0465	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0059
Silver	mg/L	0.1	NS	< 0.0120	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0020
Sodium	mg/L	NS	NS	440	176	168	169	176	175	175	171	172	184
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	**0.0113 J**
Vanadium	mg/L	**0.0082**	NS	0.0018 J	**0.0113**	**0.0117**	**0.0094**	**0.0113**	**0.0094**	**0.0092**	**0.0100**	**0.0085**	< 0.0016
Zinc	mg/L	**2**	NS	0.0088 J	< 0.0042	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	< 0.0048
Metals													
Cyanide	mg/L	0.2	NS		< 0.0050	< 0.0050	< 0.0050	< 0.0050					
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS		< 0.000084	< 0.000081	< 0.000080	< 0.000081					< 0.000096

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Aroclor 1221	mg/L	0.0017	0.053		< 0.000084	< 0.000081	< 0.000080	< 0.000081					< 0.00016
Aroclor 1232	mg/L	0.0017	0.055		< 0.00017	< 0.00016	< 0.00016	< 0.00016					< 0.000096
Aroclor 1242	mg/L	0.0017	NS		< 0.000084	< 0.000081	< 0.000080	< 0.000081					< 0.000096
Aroclor 1248	mg/L	0.0017	NS		< 0.000084	< 0.000081	< 0.000080	< 0.000081					< 0.000096
Aroclor 1254	mg/L	0.0017	NS		< 0.000084	< 0.000081	< 0.000080	< 0.000081					< 0.000096
Aroclor 1260	mg/L	0.0017	NS		< 0.00013	< 0.00012	< 0.00012	< 0.00012					< 0.000096
Total PCBs	mg/L	0.0005	NS		< 0.000084	< 0.000081	< 0.000080	< 0.000081					
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	0.0008 J	0.00059 J	0.0006 J	0.0007 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.1**
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.004 J
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.007 J
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.009 J
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	**0.016**	< 0.0005	< 0.0005	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.00040	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0007	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										< 0.005

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CS 23-Apr-18 N	MW-D3 01-Jun-16 N	MW-D3 20-Oct-16 N	MW-D3 12-Jan-17 N	MW-D3 04-Apr-17 N	MW-D3 25-Aug-17 N	MW-D3 03-Nov-17 N	MW-D3 12-Jan-18 N	MW-D3 18-Apr-18 N	MW-DD 03-Jun-04 N
Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001 J	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	0.002	0.0032	0.003	0.003	0.003	0.001	0.0006 J	< 0.0005	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	0.036
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	0.001	0.002	0.001	0.001	0.001	0.001	0.001 J	< 0.005	0.027
1,1-Dichloroethene	mg/L	**0.007**	3.8	0.002	0.0008 J	0.0007 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	**0.033**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.003 J	< 0.003	< 0.003	< 0.03	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.03	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.03	< 0.003
Acetone	mg/L	110	470,000	< 0.006	0.012 J	0.019 J	0.017 J	0.022	0.016 J	0.017 J	0.017 J	< 0.06	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	0.063	0.056	0.04	0.049	0.042	0.045	0.04	0.023 J	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	0.003 J
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	0.001 J
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	0.0008 J	0.0009 J	0.001	0.001	0.001	0.001 J	0.0009 J	< 0.005	0.028
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.5	
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.005	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.02	
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	0.0007 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	**0.081**
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.04	
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0007 J	0.0009 J	0.001	< 0.005	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	0.0006 J	0.0006 J	0.0006 J	0.0005 J	< 0.0005	< 0.005	0.006
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	0.004	0.004	0.003	0.003	0.002	0.002	0.0009 J	< 0.005	**0.19**
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-CS 23-Apr-18 N	MW-D3 01-Jun-16 N	MW-D3 20-Oct-16 N	MW-D3 12-Jan-17 N	MW-D3 04-Apr-17 N	MW-D3 25-Aug-17 N	MW-D3 03-Nov-17 N	MW-D3 12-Jan-18 N	MW-D3 18-Apr-18 N	MW-DD 03-Jun-04 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DD 15-Jan-07 N	MW-DD 14-Mar-08 N	MW-DD 24-Jun-08 N	MW-DD 26-Dec-08 N	MW-DD 23-Mar-09 N	MW-DD 15-Jun-09 N	MW-DD 28-Sep-09 N	MW-DD 18-Dec-09 N	MW-DD 12-Jan-11 N	MW-DD 20-Aug-13 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000										
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0834	< 0.0828
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053
Arsenic	mg/L	**0.01**	NS	< 0.01	< 0.0100	< 0.0102	< 0.0100	< 0.0100	< 0.0072	< 0.0072	< 0.0072	< 0.0098	< 0.0068
Barium	mg/L	2	NS	0.0244	0.0226	0.0211	0.0209	0.0202	0.0192	0.0206	0.0210	0.0229	0.0369
Beryllium	mg/L	**0.004**	NS	< 0.00094	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	0.0019 J	< 0.00067
Cadmium	mg/L	**0.005**	NS	0.0012 J	< 0.00090	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.00079 J
Calcium	mg/L	NS	NS	21.2	18.1	16.8	15.2	17.9	14.4	14.2	14.9	13.5	21.2
Chromium	mg/L	**0.1**	NS	< 0.0023	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0016
Cobalt	mg/L	**0.035**	NS	0.0023 J	0.0023 J	0.0033 J	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0023	0.0063
Copper	mg/L	1	NS	< 0.0022	< 0.0022	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027
Iron	mg/L	NS	NS	30.2	25.5	26.7	28.6	22.7	23.7	25.7	24.9	29.1	46.1
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047
Magnesium	mg/L	NS	NS	7.44	6.81	6.49	5.44	6.46	5.39	5.22	5.50	5.24	9.13
Manganese	mg/L	**0.3**	NS	**1.15**	**0.982**	**1.05**	**0.986**	**0.827**	**0.912**	**0.887**	**0.877**	**0.929**	**2.31**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.00006
Nickel	mg/L	**0.1**	NS	< 0.0056	< 0.0056	< 0.0056	< 0.0056	< 0.0056	< 0.0018	< 0.0018	< 0.0018	< 0.0030	< 0.0015
Potassium	mg/L	NS	NS	19.8	10.5	4.22	4.56	3.71	2.59	2.41	2.44	2.27	2.77
Selenium	mg/L	**0.05**	NS	< 0.0094	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084
Silver	mg/L	0.1	NS	< 0.0016	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021
Sodium	mg/L	NS	NS	165	167	167	141	168	137	150	134	131	163
Thallium	mg/L	**0.002**	NS	< 0.0135	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054
Vanadium	mg/L	**0.0082**	NS	0.0020 J	0.0016 J	< 0.0025	0.0026 J	< 0.0025	0.0026 J	< 0.0025	< 0.0025	< 0.0025	< 0.002
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.0022 J
Metals													
Cyanide	mg/L	0.2	NS										
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.00010									

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Aroclor 1221	mg/L	0.0017	0.053	< 0.00010									
Aroclor 1232	mg/L	0.0017	0.055	< 0.00010									
Aroclor 1242	mg/L	0.0017	NS	< 0.00010									
Aroclor 1248	mg/L	0.0017	NS	< 0.00010									
Aroclor 1254	mg/L	0.0017	NS	< 0.00010									
Aroclor 1260	mg/L	0.0017	NS	< 0.00010									
Total PCBs	mg/L	0.0005	NS										
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	**0.075**	0.068	0.067	**0.09**	0.047	**0.092**	0.037	**0.081**	0.048	0.068
1,2-Dichlorobenzene	mg/L	0.6	69	0.003 J	0.002 J	0.003 J	0.003 J	0.002 J	0.003 J	0.002 J	0.002 J	0.001 J	0.002
1,3-Dichlorobenzene	mg/L	0.6	NS	0.01	0.008	0.009	0.007	0.006	0.009	0.006	0.007	0.004 J	0.015
1,4-Dichlorobenzene	mg/L	0.075	0.68	0.008	0.005	0.006	0.006	0.003 J	0.006	0.004 J	0.005 J	0.003 J	0.011
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.019	< 0.02	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	0.025	0.03	0.02	0.015	0.006	0.01	0.002 J	0.006	0.003 J	0.013
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.022	0.02	0.022	0.013	0.016	0.015	0.011	0.01	0.011	0.02
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.022**	**0.017**	**0.018**	**0.013**	**0.013**	**0.012**	**0.012**	**0.009**	**0.01**	**0.016**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	0.0008 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	0.002 J	0.002 J	0.002 J	0.002 J	0.001 J	0.002 J	0.001 J	0.002 J	0.0009 J	0.002 J
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	0.001 J	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	0.002 J
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.02	0.014	0.014	0.011	0.011	0.01	0.008	0.008	0.007	0.029
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS										
Ethyl acetate	mg/L	0.62	290										
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS										
n-Butyl alcohol	mg/L	12	NS										
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	**0.053**	**0.062**	**0.048**	**0.037**	**0.013**	**0.022**	**0.006**	**0.012**	**0.009**	**0.18**
Tetrahydrofuran	mg/L	0.13	0.13										
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.005	0.003 J	0.004 J	0.004 J	0.003 J	0.004 J	0.003 J	0.004 J	0.002 J	0.008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	**0.13**	**0.12**	**0.12**	**0.084**	**0.068**	**0.078**	**0.051**	**0.058**	**0.053**	**0.12**
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DD 15-Jan-07 N	MW-DD 14-Mar-08 N	MW-DD 24-Jun-08 N	MW-DD 26-Dec-08 N	MW-DD 23-Mar-09 N	MW-DD 15-Jun-09 N	MW-DD 28-Sep-09 N	MW-DD 18-Dec-09 N	MW-DD 12-Jan-11 N	MW-DD 20-Aug-13 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DD 01-Jun-16 N	MW-DD 20-Oct-16 N	MW-DD 12-Jan-17 N	MW-DD 04-Apr-17 N	MW-DD 25-Aug-17 N	MW-DD 03-Nov-17 N	MW-DD 12-Jan-18 N	MW-DD 18-Apr-18 N	MW-DDD 12-Jan-11 N	MW-DDD 21-Aug-13 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0929	< 0.0868	0.140 J	< 0.0868	< 0.0894	< 0.0894	< 0.0894	0.128 J	< 0.0834	< 0.0828
Antimony	mg/L	**0.006**	NS	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0100	< 0.0053
Arsenic	mg/L	**0.01**	NS	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0098	< 0.0068
Barium	mg/L	2	NS	0.0387	0.0356	0.0311	0.0313	0.0290	0.0282	0.0310	0.0269	0.0466	0.0625
Beryllium	mg/L	**0.004**	NS	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0018 J	< 0.00067
Cadmium	mg/L	**0.005**	NS	< 0.00064	0.0019 J	0.0010 J	0.0010 J	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.0020	< 0.00076
Calcium	mg/L	NS	NS	24.6	26.2	20.4	18.2	17.2	15.8	20.2	16.3	144	147
Chromium	mg/L	**0.1**	NS	< 0.0020	< 0.0018	0.0021 J	0.0023 J	0.0033 J	< 0.0033	< 0.0033	< 0.0033	< 0.0034	0.0028 J
Cobalt	mg/L	**0.035**	NS	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0023	< 0.0013
Copper	mg/L	1	NS	< 0.0032	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0035 J	< 0.0027
Iron	mg/L	NS	NS	35.9	41.4	37.9	37.0	38.0	35.2	43.1	42.2	5.49	8.92
Lead	mg/L	**0.005**	NS	< 0.0051	< 0.0062	< 0.0062	< 0.0062	**0.0063 J**	< 0.00011	< 0.00011	< 0.00011	< 0.0069	< 0.0047
Magnesium	mg/L	NS	NS	7.34	7.89	7.06	7.31	6.81	6.32	7.46	6.46	25.7	24.8
Manganese	mg/L	**0.3**	NS	**1.33**	**1.30**	**1.13**	**1.23**	**1.13**	**1.07**	**1.14**	**0.994**	**0.644**	**0.516**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.00006
Nickel	mg/L	**0.1**	NS	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0035 J	< 0.0015
Potassium	mg/L	NS	NS	4.33	4.07	3.08	2.95	2.88	2.56	3.22	2.82	8.53	7.85
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	0.0119 J	< 0.0093	< 0.0093	< 0.0089	< 0.0084
Silver	mg/L	0.1	NS	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0023	< 0.0021
Sodium	mg/L	NS	NS	176	179	178	182	177	167	188	185	119	132
Thallium	mg/L	**0.002**	NS	**0.0138 J**	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0140	< 0.0054
Vanadium	mg/L	**0.0082**	NS	0.0026 J	0.0029 J	0.0040 J	0.0029 J	0.0023 J	0.0026 J	0.0028 J	0.0019 J	< 0.0025	< 0.002
Zinc	mg/L	**2**	NS	< 0.0042	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	0.0134 J	0.0089 J
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050	< 0.0050						
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000081	< 0.000082	< 0.000081	< 0.000080						

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DD 01-Jun-16 N	MW-DD 20-Oct-16 N	MW-DD 12-Jan-17 N	MW-DD 04-Apr-17 N	MW-DD 25-Aug-17 N	MW-DD 03-Nov-17 N	MW-DD 12-Jan-18 N	MW-DD 18-Apr-18 N	MW-DDD 12-Jan-11 N	MW-DDD 21-Aug-13 N
Aroclor 1221	mg/L	0.0017	0.053	< 0.000081	< 0.000082	< 0.000081	< 0.000080						
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016	< 0.00016	< 0.00016						
Aroclor 1242	mg/L	0.0017	NS	< 0.000081	< 0.000082	< 0.000081	< 0.000080						
Aroclor 1248	mg/L	0.0017	NS	< 0.000081	< 0.000082	< 0.000081	< 0.000080						
Aroclor 1254	mg/L	0.0017	NS	< 0.000081	< 0.000082	< 0.000081	< 0.000080						
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012	< 0.00012						
Total PCBs	mg/L	0.0005	NS	< 0.000081	< 0.000082	< 0.000081	< 0.000080						
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.053	0.029	0.042	0.038	0.03	0.035	0.029	0.02	0.003 J	0.003
1,2-Dichlorobenzene	mg/L	0.6	69	0.002	0.0017	0.002	0.002	0.002	0.002	0.002	0.002	< 0.001	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	0.04	0.035	0.047	0.04	0.038	0.045	0.042	0.038	< 0.001	0.0005 J
1,4-Dichlorobenzene	mg/L	0.075	0.68	0.013	0.0092	0.012	0.011	0.009	0.01	0.009	0.008	< 0.001	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	0.0006 J	0.00055 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.00040	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.002	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002 J	< 0.001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0003 J	< 0.001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.0005
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	0.003	0.002	0.002	0.003	0.002	0.001	0.001	0.0006 J	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.028	0.032	0.03	0.032	0.029	0.029	0.033	0.026	0.03	0.045
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.025**	**0.029**	**0.031**	**0.028**	**0.031**	**0.03**	**0.033**	**0.026**	**0.036**	**0.044**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	0.005	0.005	0.006	0.005	0.006	0.007	0.006	0.006	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.025	0.032	0.03	0.027	0.029	0.025	0.029	0.02	0.005	0.005 J
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002		
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	**0.055**	**0.037**	**0.042**	**0.056**	**0.041**	**0.033**	**0.021**	**0.013**	0.004 J	0.005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004		
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.019	0.024	0.024	0.021	0.025	0.024	0.028	0.022	0.002 J	0.002 J
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	**0.093**	**0.094**	**0.1**	**0.1**	**0.094**	**0.091**	**0.091**	**0.067**	**0.1**	**0.15**
Vinyl chloride	mg/L	**0.002**	0.052	0.002	**0.003**	**0.003**	**0.003**	**0.004**	**0.004**	**0.004**	**0.003**	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DD 01-Jun-16 N	MW-DD 20-Oct-16 N	MW-DD 12-Jan-17 N	MW-DD 04-Apr-17 N	MW-DD 25-Aug-17 N	MW-DD 03-Nov-17 N	MW-DD 12-Jan-18 N	MW-DD 18-Apr-18 N	MW-DDD 12-Jan-11 N	MW-DDD 21-Aug-13 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
General Parameters													
Sulfate	mg/L	NS	NS								329		
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS								264		
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS								9.6		
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0929	< 0.0868	0.125 J	< 0.0868	0.103 J	< 0.0894	< 0.0894	< 0.0894	< 0.0398	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0092	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	**0.0155 J**	< 0.0096	< 0.0094	< 0.01
Barium	mg/L	2	NS	0.0612	0.0601	0.0548	0.0610	0.0527	0.0596	0.0601	0.0563	0.0117	0.0145
Beryllium	mg/L	**0.004**	NS	< 0.0011	< 0.00067	< 0.00067	0.00078 J	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00097	< 0.00094
Cadmium	mg/L	**0.005**	NS	< 0.00064	< 0.00049	0.00058 J	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00076	< 0.00091
Calcium	mg/L	NS	NS	154	154	149	152	149	148	154	162	13.2	23
Chromium	mg/L	**0.1**	NS	< 0.0020	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0030	< 0.0023
Cobalt	mg/L	**0.035**	NS	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	0.0064	0.0072
Copper	mg/L	1	NS	0.0052 J	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0027	< 0.0022
Iron	mg/L	NS	NS	14.6	15.6	13.9	15.0	15.4	13.6	14.6	16.3	5.37	1.17
Lead	mg/L	**0.005**	NS	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060	< 0.00011	< 0.00011	< 0.00011	< 0.0100	< 0.0069
Magnesium	mg/L	NS	NS	26.5	27.1	25.1	27.8	26.8	25.5	26.4	28.0	6.15	13.2
Manganese	mg/L	**0.3**	NS	**0.819**	**0.758**	**0.652**	**0.703**	**0.668**	**0.650**	**0.655**	**0.713**	**1.56**	**1.48**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028	< 0.000056
Nickel	mg/L	**0.1**	NS	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0079 J	0.0159
Potassium	mg/L	NS	NS	7.48	7.83	7.14	7.68	7.90	7.28	7.53	7.93	6.2	3.04
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0059	< 0.0094
Silver	mg/L	0.1	NS	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0020	< 0.0016
Sodium	mg/L	NS	NS	126	127	117	129	122	122	129	131	163	211
Thallium	mg/L	**0.002**	NS	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0099	< 0.0135
Vanadium	mg/L	**0.0082**	NS	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0015
Zinc	mg/L	**2**	NS	0.0082 J	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	0.0134 J	0.0326
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050	< 0.0050						
Metals, Total													
Iron	mg/L	NS	NS								19.1		
Manganese	mg/L	**0.3**	NS								**0.701**		
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000082	< 0.000082	< 0.000081	< 0.000083					< 0.00010	< 0.000096

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000082	< 0.000082	< 0.000081	< 0.000083					< 0.00017	< 0.000096
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016	< 0.00016	< 0.00017					< 0.00010	< 0.000096
Aroclor 1242	mg/L	0.0017	NS	< 0.000082	< 0.000082	< 0.000081	< 0.000083					< 0.00010	< 0.000096
Aroclor 1248	mg/L	0.0017	NS	< 0.000082	< 0.000082	< 0.000081	< 0.000083					< 0.00010	< 0.000096
Aroclor 1254	mg/L	0.0017	NS	< 0.000082	< 0.000082	< 0.000081	< 0.000083					< 0.00010	< 0.000096
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012	< 0.00012					< 0.00010	< 0.000096
Total PCBs	mg/L	0.0005	NS	< 0.000082	< 0.000082	< 0.000081	< 0.000083						
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.008	0.008	0.008	0.007	0.009	0.009	0.005	0.011	**0.094**	**0.19**
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.004 J	0.007
1,3-Dichlorobenzene	mg/L	0.6	NS	0.004	0.003	0.003	0.003	0.004	0.004	0.002	0.005	0.001 J	0.003 J
1,4-Dichlorobenzene	mg/L	0.075	0.68	0.001	0.001 J	0.0009 J	0.0009 J	0.001	0.001	0.0007 J	0.001	0.004 J	0.01
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.022	< 0.021
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001 J	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

Table 6
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East 10th Street Site
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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0004 J	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.058	0.15
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.065	0.063	0.057	0.07	0.062	0.062	0.066	0.059	0.008	0.033
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.074**	**0.071**	**0.068**	**0.073**	**0.081**	**0.078**	**0.075**	**0.065**	**0.011**	**0.031**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0005 J	< 0.0005	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DDD 01-Jun-16 N	MW-DDD 20-Oct-16 N	MW-DDD 12-Jan-17 N	MW-DDD 04-Apr-17 N	MW-DDD 25-Aug-17 N	MW-DDD 03-Nov-17 N	MW-DDD 12-Jan-18 N	MW-DDD 18-Apr-18 N	MW-DS 03-Jun-04 N	MW-DS 15-Jan-07 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.004 J	0.001 J
Chlorobenzene	mg/L	0.1	9.6	0.0009 J	0.0008 J	0.0009 J	0.001 J	0.001	0.0009 J	0.0007 J	0.001	0.002 J	0.006
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.007	0.004 J
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.008	0.008	0.009	0.008	0.011	0.014	0.016	0.012	0.008	0.017
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002		
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	**0.011**	**0.012**	**0.011**	**0.01**	**0.015**	**0.01**	**0.006**	**0.012**	**0.097**	**0.28**
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004		
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0006 J	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.008	0.007	0.007	0.007	0.009	0.008	0.007	0.008	< 0.0008	0.0008 J
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	**0.23**	**0.24**	**0.22**	**0.25**	**0.26**	**0.24**	**0.23**	**0.23**	**0.1**	**0.28**
Vinyl chloride	mg/L	**0.002**	0.052	0.0007 J	0.0007 J	0.0008 J	0.0009 J	0.001	0.002	0.001	0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0007 J	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DDD 01-Jun-16 N	MW-DDD 20-Oct-16 N	MW-DDD 12-Jan-17 N	MW-DDD 04-Apr-17 N	MW-DDD 25-Aug-17 N	MW-DDD 03-Nov-17 N	MW-DDD 12-Jan-18 N	MW-DDD 18-Apr-18 N	MW-DS 03-Jun-04 N	MW-DS 15-Jan-07 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DS 18-Mar-08 N	MW-DS 24-Jun-08 N	MW-DS 26-Dec-08 N	MW-DS 23-Mar-09 N	MW-DS 15-Jun-09 N	MW-DS 15-Jun-09 FD	MW-DS 28-Sep-09 N	MW-DS 18-Dec-09 N	MW-DS 12-Jan-11 N	MW-DS 21-Aug-13 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000										
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	0.0994 J	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	0.439	0.138 J	< 0.0828
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053
Arsenic	mg/L	**0.01**	NS	< 0.0100	< 0.0102	< 0.0100	< 0.0100	< 0.0072	< 0.0072	< 0.0072	< 0.0072	< 0.0098	< 0.0068
Barium	mg/L	2	NS	0.0124	0.0105	0.0170	0.0099	0.0126	0.0126	0.0137	0.0219	0.0199	0.0221
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.0014	0.0017 J	< 0.00067
Cadmium	mg/L	**0.005**	NS	< 0.00090	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00076
Calcium	mg/L	NS	NS	29.7	26.5	27.4	21.0	24.2	24.5	24.1	27.3	29.3	36.4
Chromium	mg/L	**0.1**	NS	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0034	0.0025 J
Cobalt	mg/L	**0.035**	NS	0.0084	0.0078	0.0072	0.0052	0.0063	0.0065	0.0057	0.0078	0.0069	0.0069
Copper	mg/L	1	NS	0.0022 J	0.0039 J	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	0.0037 J	< 0.0027
Iron	mg/L	NS	NS	1.13	0.786	1.60	0.335	1.56	1.52	0.144 J	2.21	1.33	0.281
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047
Magnesium	mg/L	NS	NS	17.4	15.5	16.2	12.1	14.5	14.6	15.1	17.2	18.7	20.6
Manganese	mg/L	**0.3**	NS	**1.92**	**1.58**	**1.75**	**1.27**	**1.55**	**1.55**	**1.51**	**1.72**	**1.93**	**1.9**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.00006
Nickel	mg/L	**0.1**	NS	0.0157	0.0150	0.0159	0.0139	0.0132	0.0136	0.0117	0.0152	0.0140	0.0135
Potassium	mg/L	NS	NS	3.04	2.50	5.60	2.14	2.84	2.88	3.46	3.67	3.73	5.98
Selenium	mg/L	**0.05**	NS	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084
Silver	mg/L	0.1	NS	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021
Sodium	mg/L	NS	NS	187	154	184	152	131	133	145	174	185	252
Thallium	mg/L	**0.002**	NS	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	**0.006 J**
Vanadium	mg/L	**0.0082**	NS	< 0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.002
Zinc	mg/L	**2**	NS	0.0302	0.0255	0.0297	0.0244	0.0199 J	0.0219	0.0131 J	0.0277	0.0254	0.0185 J
Metals													
Cyanide	mg/L	0.2	NS										
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS										

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DS 18-Mar-08 N	MW-DS 24-Jun-08 N	MW-DS 26-Dec-08 N	MW-DS 23-Mar-09 N	MW-DS 15-Jun-09 N	MW-DS 15-Jun-09 FD	MW-DS 28-Sep-09 N	MW-DS 18-Dec-09 N	MW-DS 12-Jan-11 N	MW-DS 21-Aug-13 N
Aroclor 1221	mg/L	0.0017	0.053										
Aroclor 1232	mg/L	0.0017	0.055										
Aroclor 1242	mg/L	0.0017	NS										
Aroclor 1248	mg/L	0.0017	NS										
Aroclor 1254	mg/L	0.0017	NS										
Aroclor 1260	mg/L	0.0017	NS										
Total PCBs	mg/L	0.0005	NS										
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	**0.26**	**0.12**	**0.13**	**0.13**	**0.21**	**0.23**	0.065	**0.11**	**0.11**	**0.18**
1,2-Dichlorobenzene	mg/L	0.6	69	0.009	0.005 J	0.006	0.003 J	0.005	0.006	0.002 J	0.004 J	0.005 J	0.006
1,3-Dichlorobenzene	mg/L	0.6	NS	0.003 J	0.001 J	0.002 J	0.001 J	0.002 J	0.002 J	< 0.001	0.002 J	0.005 J	0.006
1,4-Dichlorobenzene	mg/L	0.075	0.68	0.011	0.005	0.008	0.003 J	0.006	0.006	0.002 J	0.005	0.008	0.009
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.021	< 0.02	< 0.021	< 0.02	< 0.02	< 0.02	< 0.019	< 0.02	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	0.15	0.05	0.13	0.075	0.036	0.036	0.024	0.079	0.013	0.027
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	0.0008 J	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.041	0.012	0.038	0.016	0.008	0.008	0.006	0.026	0.008	0.016
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.028**	**0.01**	**0.03**	**0.017**	**0.008**	**0.008**	0.005	**0.016**	0.006	**0.009**
1,2-Dichloroethane	mg/L	0.005	0.51	0.001 J	< 0.001	0.002 J	< 0.001	< 0.001	< 0.001	< 0.001	0.001 J	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	0.002 J	**0.009**	< 0.001	**0.025**	**0.017**	**0.016**	**0.007**	0.004 J	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	0.006	0.003 J	0.005 J	0.001 J	0.003 J	0.002 J	0.001 J	0.003 J	0.003 J	0.004 J
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	0.006	0.012	0.003 J	0.033	0.017	0.017	0.017	0.007	0.0008 J	0.001 J
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.019	0.008	0.029	0.015	0.007	0.007	0.011	0.022	0.013	0.032
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS										
Ethyl acetate	mg/L	0.62	290										
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS										
n-Butyl alcohol	mg/L	12	NS										
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	**0.37**	**0.15**	**0.21**	**0.15**	**0.065**	**0.055**	**0.047**	**0.2**	**0.17**	**0.22**
Tetrahydrofuran	mg/L	0.13	0.13										
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.001 J	< 0.0008	0.001 J	0.001 J	0.001 J	0.0009 J	< 0.0008	0.0008 J	0.0009 J	0.003 J
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	**0.3**	**0.12**	**0.25**	**0.17**	**0.086**	**0.081**	**0.073**	**0.19**	**0.082**	**0.11**
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DS 01-Jun-16 N	MW-DS 20-Oct-16 N	MW-DS 12-Jan-17 N	MW-DS 04-Apr-17 N	MW-DS 25-Aug-17 N	MW-DS 03-Nov-17 N	MW-DS 12-Jan-18 N	MW-DS 18-Apr-18 N	MW-ED 15-Jan-07 N	MW-ED 15-Jan-07 FD
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0929	< 0.0868	< 0.0868	0.175 J	< 0.0894	0.133 J	< 0.0894	< 0.0894	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.01	< 0.01
Barium	mg/L	2	NS	0.0254	0.0298	0.0215	0.0258	0.0261	0.0314	0.0295	0.0294	0.0287	0.0314
Beryllium	mg/L	**0.004**	NS	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00094	< 0.00094
Cadmium	mg/L	**0.005**	NS	< 0.00064	< 0.00049	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	0.0018 J	0.0019 J
Calcium	mg/L	NS	NS	30.5	38.4	36.4	37.7	35.7	43.8	56.6	57.4	153	170
Chromium	mg/L	**0.1**	NS	< 0.0020	< 0.0018	< 0.0018	0.0020 J	< 0.0033	< 0.0033	**0.144**	< 0.0033	< 0.0023	< 0.0023
Cobalt	mg/L	**0.035**	NS	0.0016 J	< 0.0019	< 0.0019	< 0.0019	0.0019 J	< 0.0017	< 0.0017	< 0.0017	0.0224	0.0254
Copper	mg/L	1	NS	0.0039 J	< 0.0041	< 0.0041	< 0.0041	0.0054 J	< 0.0040	0.0073 J	< 0.0040	< 0.0022	< 0.0022
Iron	mg/L	NS	NS	0.105 J	0.231	< 0.0747	0.378	< 0.0805	0.406	1.17	0.593	48.5	53.6
Lead	mg/L	**0.005**	NS	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060	< 0.00011	< 0.00011	< 0.00011	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	17.8	22.5	18.7	18.2	16.3	21.7	27.1	23.5	40.1	44.4
Manganese	mg/L	**0.3**	NS	**1.14**	**1.20**	**0.972**	**1.01**	**0.764**	**0.915**	**1.08**	**1.04**	**2.7**	**2.99**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	0.0036 J	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0197	0.0228
Potassium	mg/L	NS	NS	3.14	3.26	2.28	2.34	2.81	2.68	2.68	2.66	19.9	22
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0094	< 0.0094
Silver	mg/L	0.1	NS	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0016	< 0.0016
Sodium	mg/L	NS	NS	174	174	115	127	172	137	120	149	189	172
Thallium	mg/L	**0.002**	NS	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0135	< 0.0135
Vanadium	mg/L	**0.0082**	NS	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0015	< 0.0015
Zinc	mg/L	**2**	NS	0.0057 J	< 0.0054	0.0072 J	< 0.0054	< 0.0065	< 0.0065	0.0082 J	< 0.0065	0.0298	0.0325
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050	< 0.0050						
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000082	< 0.000080	< 0.000080	< 0.000081					< 0.000096	< 0.00010

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000082	< 0.000080	< 0.000080	< 0.000081					< 0.000096	< 0.00010
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016	< 0.00016	< 0.00016					< 0.000096	< 0.00010
Aroclor 1242	mg/L	0.0017	NS	< 0.000082	< 0.000080	< 0.000080	< 0.000081					< 0.000096	< 0.00010
Aroclor 1248	mg/L	0.0017	NS	< 0.000082	< 0.000080	< 0.000080	< 0.000081					< 0.000096	0.00013 J
Aroclor 1254	mg/L	0.0017	NS	< 0.000082	< 0.000080	< 0.000080	< 0.000081					< 0.000096	< 0.00010
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012	< 0.00012					< 0.000096	< 0.00010
Total PCBs	mg/L	0.0005	NS	< 0.000082	< 0.000080	< 0.000080	< 0.000081						
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	**0.15**	**0.13**	**0.082**	**0.1**	**0.11**	0.069	**0.12**	**0.086**	0.004 J	0.004 J
1,2-Dichlorobenzene	mg/L	0.6	69	0.006	0.005	0.002	0.004	0.004	0.003	0.005	0.003	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	0.005	0.005	0.007	0.011	0.003	0.003	0.006	0.004	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	0.009	0.007	0.008	0.013	0.007	0.005	0.009	0.005	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.021	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002 J	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	0.0003 J	0.0003 J	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	0.013	0.002	< 0.0005	< 0.0005	0.002	0.0007 J	< 0.0005	0.001 J	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.009	0.003	0.0005 J	0.0007 J	0.002	0.001	0.0009 J	0.002	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	0.006	0.002	< 0.0005	< 0.0005	0.002	0.0009 J	< 0.0005	0.001	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	0.007 J	0.008 J
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DS 01-Jun-16 N	MW-DS 20-Oct-16 N	MW-DS 12-Jan-17 N	MW-DS 04-Apr-17 N	MW-DS 25-Aug-17 N	MW-DS 03-Nov-17 N	MW-DS 12-Jan-18 N	MW-DS 18-Apr-18 N	MW-ED 15-Jan-07 N	MW-ED 15-Jan-07 FD
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.049	0.049
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	0.003	0.002	0.001	0.003	0.004	0.001	0.002	0.001	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	0.0007 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.025	0.006	0.002	0.003	0.007	0.004	0.004	0.007	0.0008 J	0.0009 J
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002		
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	**0.16**	**0.049**	0.004	0.002	**0.017**	**0.008**	0.004	**0.014**	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004		
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.002	0.002	< 0.0005	< 0.0005	0.001	0.001	0.0009 J	0.002	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	**0.063**	**0.022**	0.003	0.002	**0.018**	**0.011**	0.005	**0.015**	**0.006**	**0.006**
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-DS 01-Jun-16 N	MW-DS 20-Oct-16 N	MW-DS 12-Jan-17 N	MW-DS 04-Apr-17 N	MW-DS 25-Aug-17 N	MW-DS 03-Nov-17 N	MW-DS 12-Jan-18 N	MW-DS 18-Apr-18 N	MW-ED 15-Jan-07 N	MW-ED 15-Jan-07 FD

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000										
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	0.0946 J	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	0.117 J	< 0.0828
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053
Arsenic	mg/L	**0.01**	NS	< 0.0100	< 0.0100	< 0.0102	< 0.0100	< 0.0100	0.0100 J	< 0.0072	< 0.0072	< 0.0098	0.0082 J
Barium	mg/L	2	NS	0.0237	0.0239	0.0262	0.0254	0.0245	0.0271	0.0254	0.0265	0.0272	0.028
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.00067
Cadmium	mg/L	**0.005**	NS	< 0.00090	< 0.00090	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00076
Calcium	mg/L	NS	NS	150	148	168	160	161	164	164	169	162	155
Chromium	mg/L	**0.1**	NS	< 0.0023	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0016
Cobalt	mg/L	**0.035**	NS	0.0140	0.0151	0.0097	0.0080	0.0072	0.0055	0.0055	0.0056	0.0089	< 0.0013
Copper	mg/L	1	NS	0.0043 J	0.0051 J	< 0.0027	0.0035 J	< 0.0027	0.0036 J	< 0.0027	< 0.0027	< 0.0027	< 0.0027
Iron	mg/L	NS	NS	10.3	7.90	24.5	23.8	22.9	27.1	29.8	29.3	25.8	9.78
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047
Magnesium	mg/L	NS	NS	35.4	35.4	35.7	34.9	32.6	31.6	32.6	33.7	29.9	29.6
Manganese	mg/L	**0.3**	NS	**1.81**	**1.85**	**1.77**	**1.61**	**1.52**	**1.61**	**1.52**	**1.48**	**1.70**	**0.796**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	0.00011 J	< 0.000056	< 0.000050	< 0.00006
Nickel	mg/L	**0.1**	NS	0.0148	0.0152	0.0115	0.0115	0.0085 J	0.0077 J	0.0056 J	0.0055 J	0.0037 J	< 0.0015
Potassium	mg/L	NS	NS	14.1	14.8	14.6	15.8	9.37	9.24	9.66	9.52	9.50	8.98
Selenium	mg/L	**0.05**	NS	< 0.0094	< 0.0094	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084
Silver	mg/L	0.1	NS	< 0.0016	< 0.0016	< 0.0022	< 0.0022	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021
Sodium	mg/L	NS	NS	164	164	165	163	169	183	193	185	194	192
Thallium	mg/L	**0.002**	NS	< 0.0105	< 0.0105	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054
Vanadium	mg/L	**0.0082**	NS	< 0.0015	< 0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.002
Zinc	mg/L	**2**	NS	0.0242	0.0261	0.0133 J	0.0136 J	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.0092 J	0.0025 J
Metals													
Cyanide	mg/L	0.2	NS										
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS										

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Aroclor 1221	mg/L	0.0017	0.053										
Aroclor 1232	mg/L	0.0017	0.055										
Aroclor 1242	mg/L	0.0017	NS										
Aroclor 1248	mg/L	0.0017	NS										
Aroclor 1254	mg/L	0.0017	NS										
Aroclor 1260	mg/L	0.0017	NS										
Total PCBs	mg/L	0.0005	NS										
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.003 J	0.002 J	0.002 J	0.001 J	0.002 J	0.002 J	0.001 J	0.002 J	0.001 J	0.0009 J
1,2-Dichlorobenzene	mg/L	0.6	69	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
1,3-Dichlorobenzene	mg/L	0.6	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
1,4-Dichlorobenzene	mg/L	0.075	0.68	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
2,4,5-Trichlorophenol	mg/L	12	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
2,4,6-Trichlorophenol	mg/L	0.12	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
2,4-Dichlorophenol	mg/L	0.02	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
2,4-Dimethylphenol	mg/L	2.3	NS	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.0005*
2,4-Dinitrophenol	mg/L	0.23	NS	*< 0.022*	*< 0.02*	*< 0.02*	*< 0.019*	*< 0.02*	*< 0.02*	*< 0.021*	*< 0.02*	*< 0.01*	*< 0.01*
2,4-Dinitrotoluene	mg/L	0.011	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*
2,6-Dinitrotoluene	mg/L	**0.002**	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
2-Chloronaphthalene	mg/L	9.3	NS	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.0004*
2-Chlorophenol	mg/L	0.04	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
2-Methylnaphthalene	mg/L	0.47	4.8	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0001*
2-Nitroaniline	mg/L	1.2	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
2-Nitrophenol	mg/L	0.93	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*
3-Nitroaniline	mg/L	NS	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
4-Bromophenyl phenyl ether	mg/L	NS	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
4-Chloro-3-methylphenol	mg/L	12	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
4-Chlorophenyl phenyl ether	mg/L	NS	NS	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.0005*
4-Nitrophenol	mg/L	0.06	NS	*< 0.011*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.011*	*< 0.01*	*< 0.01*	*< 0.01*
Acenaphthene	mg/L	3.8	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0001*
Acenaphthylene	mg/L	7	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0001*
Anthracene	mg/L	0.066	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0001*
Benzo(a)anthracene	mg/L	0.0049	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0001*
Benzo(a)pyrene	mg/L	**0.0002**	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0001*
Benzo(b)fluoranthene	mg/L	0.0012	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0001*
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0001*
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0001*
Benzyl butyl phthalate	mg/L	1.8	NS	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.0005*
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.006	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.006	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-ED 17-Mar-08 N	MW-ED 17-Mar-08 FD	MW-ED 23-Jun-08 N	MW-ED 23-Dec-08 N	MW-ED 20-Mar-09 N	MW-ED 11-Jun-09 N	MW-ED 23-Sep-09 N	MW-ED 17-Dec-09 N	MW-ED 11-Jan-11 N	MW-ED 19-Aug-13 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS										
Ethyl acetate	mg/L	0.62	290										
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS										
n-Butyl alcohol	mg/L	12	NS										
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Tetrahydrofuran	mg/L	0.13	0.13										
Toluene	mg/L	1	430	0.0009 J	0.0009 J	< 0.0007	0.0008 J	0.001 J	< 0.0007	0.0008 J	0.001 J	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	0.004 J	0.004 J	0.003 J	0.003 J	0.003 J	0.003 J	0.002 J	0.002 J	0.002 J	0.001 J
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0008	0.001 J	< 0.0008	0.001 J	0.0008 J	< 0.0008	< 0.0008	0.001 J	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-ED 17-Mar-08 N	MW-ED 17-Mar-08 FD	MW-ED 23-Jun-08 N	MW-ED 23-Dec-08 N	MW-ED 20-Mar-09 N	MW-ED 11-Jun-09 N	MW-ED 23-Sep-09 N	MW-ED 17-Dec-09 N	MW-ED 11-Jan-11 N	MW-ED 19-Aug-13 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-ED 27-May-16 N	MW-ED 17-Oct-16 N	MW-ED 11-Jan-17 N	MW-ED 27-Mar-17 N	MW-ED 24-Aug-17 N	MW-ED 26-Oct-17 N	MW-ED 18-Jan-18 N	MW-ED 20-Apr-18 N	MW-FD 08-Jun-04 N	MW-FD 17-Jan-07 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0929	< 0.0868	< 0.0868	< 0.0868	0.154 J	< 0.0894	< 0.0894	< 0.0894	< 0.0398	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0092	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0078	< 0.0097	< 0.0097	**0.0131 J**	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0094	< 0.01
Barium	mg/L	2	NS	0.0247	0.0323	0.0377	0.0334	0.0377	0.0344	0.0347	0.0382	0.0533	0.0542
Beryllium	mg/L	**0.004**	NS	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00097	< 0.00094
Cadmium	mg/L	**0.005**	NS	< 0.00064	< 0.00049	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	0.0016 J	< 0.0046
Calcium	mg/L	NS	NS	145	137	125	131	127	119	126	128	240	209
Chromium	mg/L	**0.1**	NS	< 0.0020	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0025	< 0.0023
Cobalt	mg/L	**0.035**	NS	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0020	< 0.0021
Copper	mg/L	1	NS	< 0.0032	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0027	< 0.0022
Iron	mg/L	NS	NS	1.74	5.32	12.6	15.8	15.3	15.5	16.8	20.8	310	247
Lead	mg/L	**0.005**	NS	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060	0.00015 J	< 0.00011	< 0.00011	< 0.0100	< 0.0069
Magnesium	mg/L	NS	NS	28.7	26.2	25.8	25.7	25.1	22.8	23.9	24.8	67.5	56
Manganese	mg/L	**0.3**	NS	0.238	**0.635**	**0.726**	**0.727**	**0.715**	**0.716**	**0.776**	**0.748**	**6.2**	**5.09**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028	0.000098 J
Nickel	mg/L	**0.1**	NS	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0051	< 0.0056
Potassium	mg/L	NS	NS	8.48	7.83	7.60	7.62	7.76	6.85	7.41	7.44	13.9	9.91
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0059	< 0.0094
Silver	mg/L	0.1	NS	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0020	< 0.0016
Sodium	mg/L	NS	NS	209	208	206	210	213	200	221	221	205	209
Thallium	mg/L	**0.002**	NS	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0099	< 0.0135
Vanadium	mg/L	**0.0082**	NS	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0015
Zinc	mg/L	**2**	NS	< 0.0042	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	< 0.0048	< 0.0081
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050	< 0.0050						
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000083	< 0.000082	< 0.000081	< 0.000085					< 0.000098	< 0.00010

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000083	< 0.000082	< 0.000081	< 0.000085					< 0.00017	< 0.00010
Aroclor 1232	mg/L	0.0017	0.055	< 0.00017	< 0.00016	< 0.00016	< 0.00017					< 0.000098	< 0.00010
Aroclor 1242	mg/L	0.0017	NS	< 0.000083	< 0.000082	< 0.000081	< 0.000085					< 0.000098	< 0.00010
Aroclor 1248	mg/L	0.0017	NS	< 0.000083	< 0.000082	< 0.000081	< 0.000085					< 0.000098	< 0.00010
Aroclor 1254	mg/L	0.0017	NS	< 0.000083	< 0.000082	< 0.000081	< 0.000085					< 0.000098	< 0.00010
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012	< 0.00013					< 0.000098	< 0.00010
Total PCBs	mg/L	0.0005	NS	< 0.000083	< 0.000082	< 0.000081	< 0.000085						
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.0006 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0005 J	< 0.0005	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.019	< 0.021
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0004 J	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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East 10th Street Site
Marcus Hook, Pennsylvania

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	0.0002 J	< 0.0001	< 0.0001	< 0.0001	0.0007	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	0.013
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.8	< 0.08
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.8	< 0.08
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.8	< 0.08
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 3	< 0.3
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 3	< 0.3
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 3	< 0.3
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 6	< 0.6
Benzene	mg/L	0.005	0.35	< 0.0005	0.001	0.0008 J	0.0007 J	0.0005 J	< 0.0005	< 0.0005	< 0.0005	< 0.5	< 0.05

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-ED 27-May-16 N	MW-ED 17-Oct-16 N	MW-ED 11-Jan-17 N	MW-ED 27-Mar-17 N	MW-ED 24-Aug-17 N	MW-ED 26-Oct-17 N	MW-ED 18-Jan-18 N	MW-ED 20-Apr-18 N	MW-FD 08-Jun-04 N	MW-FD 17-Jan-07 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**420**	**270**
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.8	< 0.08
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.8	< 0.08
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	0.0006 J	0.0006 J	0.0007 J	0.0008 J	0.0007 J	0.0007 J	0.0009 J	< 0.8	< 0.08
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.8	< 0.08
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 2	< 0.2
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002		
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.1
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.8	< 0.08
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004		
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.001	< 0.7	0.1 J
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.8	< 0.08
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
Trichloroethene	mg/L	**0.005**	**0.11**	0.0006 J	0.0007 J	0.0007 J	0.0008 J	0.0009 J	0.0008 J	0.001 J	0.001 J	< 1	< 0.1
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 1	< 0.1
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.001	< 0.8	< 0.08

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-ED 27-May-16 N	MW-ED 17-Oct-16 N	MW-ED 11-Jan-17 N	MW-ED 27-Mar-17 N	MW-ED 24-Aug-17 N	MW-ED 26-Oct-17 N	MW-ED 18-Jan-18 N	MW-ED 20-Apr-18 N	MW-FD 08-Jun-04 N	MW-FD 17-Jan-07 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-FD 19-Mar-08 N	MW-FD 24-Jun-08 N	MW-FD 29-Dec-08 N	MW-FD 24-Mar-09 N	MW-FD 16-Jun-09 N	MW-FD 29-Sep-09 N	MW-FD 23-Dec-09 N	MW-FD 13-Jan-11 N	MW-FD 22-Aug-13 N	MW-FD 08-Jun-16 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000										< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0834	< 0.0828	< 0.0929
Antimony	mg/L	**0.006**	NS	< 0.0097	**0.0106 J**	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	**0.0104 J**	< 0.0053	< 0.0310
Arsenic	mg/L	**0.01**	NS	< 0.0100	< 0.0102	< 0.0100	< 0.0100	0.0082 J	< 0.0072	< 0.0072	< 0.0098	**0.0154 J**	< 0.0078
Barium	mg/L	2	NS	0.0534	0.0531	0.0523	0.0472	0.0490	0.0460	0.0473	0.0436	0.049	0.0486
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	0.0015 J	< 0.00067	< 0.0011
Cadmium	mg/L	**0.005**	NS	< 0.00090	< 0.0020	< 0.0100	< 0.0020	< 0.0020	**0.0064**	**0.0067**	< 0.0020	< 0.00076	0.00076 J
Calcium	mg/L	NS	NS	202	213	215	207	219	200	223	160	209	200
Chromium	mg/L	**0.1**	NS	< 0.0023	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	0.0027 J	0.0040 J
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0023	< 0.0013	< 0.00090
Copper	mg/L	1	NS	< 0.0022	0.0038 J	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0135	< 0.0027	< 0.0027	0.0046 J
Iron	mg/L	NS	NS	222	250	257	272	261	229	225	246	221	160
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	**0.0125 J**	**0.0077 J**	< 0.0051
Magnesium	mg/L	NS	NS	55.4	56.9	56.6	54.7	58.6	54.3	59.6	48.0	53.5	51.1
Manganese	mg/L	**0.3**	NS	**4.91**	**5.16**	**4.93**	**4.74**	**5.01**	**4.66**	**5.05**	**4.61**	**5.3**	**5.13**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.00028	< 0.00028	< 0.000056	< 0.000056	< 0.000056	< 0.00056	< 0.000050	< 0.00006	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0056	< 0.0056	0.0112	< 0.0056	< 0.0018	< 0.0018	0.0073 J	0.0065 J	< 0.0015	< 0.0025
Potassium	mg/L	NS	NS	10.7	9.66	17.0	9.41	10.2	9.61	10.4	8.61	9.41	9.37
Selenium	mg/L	**0.05**	NS	< 0.0094	< 0.0107	0.0120 J	< 0.0107	< 0.0089	< 0.0089	0.0128 J	0.0100 J	< 0.0084	< 0.0097
Silver	mg/L	0.1	NS	< 0.0016	< 0.0022	0.0136	< 0.0022	< 0.0023	< 0.0023	0.0049 J	< 0.0023	< 0.0021	< 0.0019
Sodium	mg/L	NS	NS	223	240	214	215	215	232	221	214	231	220
Thallium	mg/L	**0.002**	NS	**0.0226**	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	**0.0207 J**
Vanadium	mg/L	**0.0082**	NS	< 0.0015	< 0.0025	0.0051	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.002	0.0025 J
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.0120 J	< 0.0081	0.0092 J	< 0.002	< 0.0042
Metals													
Cyanide	mg/L	0.2	NS										< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS										< 0.000080

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Aroclor 1221	mg/L	0.0017	0.053										< 0.000080
Aroclor 1232	mg/L	0.0017	0.055										< 0.00016
Aroclor 1242	mg/L	0.0017	NS										< 0.000080
Aroclor 1248	mg/L	0.0017	NS										< 0.000080
Aroclor 1254	mg/L	0.0017	NS										< 0.000080
Aroclor 1260	mg/L	0.0017	NS										< 0.00012
Total PCBs	mg/L	0.0005	NS										< 0.000080
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.02	< 0.021	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.011	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0001 J	0.0002 J
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	0.003 J	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	0.003 J	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0001 J	0.0001 J
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0002 J	0.0003 J
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	0.042	0.046	0.039	< 0.002	0.043	0.035	0.012	0.1	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.016	< 0.0008	< 0.16	< 0.8	< 0.008	< 0.0008	< 0.2	< 0.0008	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.016	< 0.0008	< 0.16	< 0.8	< 0.008	< 0.0008	< 0.2	< 0.0008	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.016	< 0.0008	< 0.16	< 0.8	< 0.008	< 0.0008	< 0.2	< 0.0008	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
2-Butanone	mg/L	4	49,000	0.009 J	< 0.06	0.007 J	< 0.6	< 3	< 0.03	0.009 J	< 0.75	0.011	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.06	< 0.003	< 0.6	< 3	< 0.03	< 0.003	< 0.75	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	0.004 J	< 0.06	0.004 J	< 0.6	< 3	< 0.03	0.005 J	< 0.75	0.013	< 0.003
Acetone	mg/L	110	470,000	0.017 J	< 0.12	0.01 J	< 1.2	< 6	< 0.06	0.02	< 1.5	0.017 J	< 0.006
Benzene	mg/L	0.005	0.35	0.0009 J	< 0.01	0.0009 J	< 0.1	< 0.5	< 0.005	0.001 J	< 0.13	0.0008 J	0.0007 J

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	**290**	**250**	**240**	**210**	**250**	**230**	**260**	**200**	**170**	0.2
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.016	< 0.0008	< 0.16	< 0.8	< 0.008	< 0.0008	< 0.2	< 0.0008	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.016	< 0.0008	< 0.16	< 0.8	< 0.008	< 0.0008	< 0.2	< 0.0008	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.016	< 0.0008	< 0.16	< 0.8	< 0.008	< 0.0008	< 0.2	< 0.0008	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Ethanol	mg/L	NS	NS										< 0.05
Ethyl acetate	mg/L	0.62	290										< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.016	< 0.0008	< 0.16	< 0.8	< 0.008	< 0.0008	< 0.2	< 0.0008	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.04	< 0.002	< 0.4	< 2	< 0.02	< 0.002	< 0.5	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS										< 0.002
n-Butyl alcohol	mg/L	12	NS										< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.016	< 0.0008	< 0.16	< 0.8	< 0.008	< 0.0008	< 0.2	< 0.0008	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13										0.006 J
Toluene	mg/L	1	430	0.097	0.078 J	0.083	< 0.14	< 0.7	0.089	0.095	< 0.18	0.072	0.005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.016	< 0.0008	< 0.16	< 0.8	< 0.008	< 0.0008	< 0.2	< 0.0008	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.02	< 0.001	< 0.2	< 1	< 0.01	< 0.001	< 0.25	< 0.001	< 0.0005
Xylenes	mg/L	10	12	0.002 J	< 0.016	0.002 J	< 0.16	< 0.8	< 0.008	0.002 J	< 0.2	< 0.0008	0.0006 J

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-FD 19-Mar-08 N	MW-FD 24-Jun-08 N	MW-FD 29-Dec-08 N	MW-FD 24-Mar-09 N	MW-FD 16-Jun-09 N	MW-FD 29-Sep-09 N	MW-FD 23-Dec-09 N	MW-FD 13-Jan-11 N	MW-FD 22-Aug-13 N	MW-FD 08-Jun-16 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-FD 14-Jul-16 N	MW-FD 27-Oct-16 N	MW-FD 19-Jan-17 N	MW-FD 07-Apr-17 N	MW-FD 17-Aug-17 N	MW-FD 26-Oct-17 N	MW-FD 22-Jan-18 N	MW-FD 17-Apr-18 N	MW-FDD 08-Jun-16 N	MW-FDD 14-Jul-16 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0868	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894	0.103 J	< 0.0868
Antimony	mg/L	**0.006**	NS	< 0.0385	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0062	< 0.0077
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0078	< 0.0097
Barium	mg/L	2	NS	0.0450	0.0442	0.0461	0.0440	0.0399	0.0452	0.0425	0.0323	0.0472	0.0448
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0011	< 0.00067
Cadmium	mg/L	**0.005**	NS	< 0.0025	< 0.00049	0.0025 J	< 0.00049	< 0.0018	< 0.0018	0.0033 J	0.0019 J	< 0.00064	< 0.00049
Calcium	mg/L	NS	NS	200	193	198	195	172	189	186	144	469	472
Chromium	mg/L	**0.1**	NS	0.0036 J	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	0.0033 J	0.0037 J
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	0.0038 J	0.0025 J
Copper	mg/L	1	NS	0.0058 J	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0032	< 0.0041
Iron	mg/L	NS	NS	172	157	164	161	156	168	166	174	25.5	30.1
Lead	mg/L	**0.005**	NS	< 0.0620	< 0.0310	**0.0064 J**	**0.0086 J**	**0.0117 J**	< 0.00011	< 0.00011	< 0.00011	**0.0074 J**	< 0.0062
Magnesium	mg/L	NS	NS	50.6	48.1	50.3	52.4	44.7	49.3	47.7	39.5	55.0	54.1
Manganese	mg/L	**0.3**	NS	**4.94**	**4.98**	**5.47**	**5.54**	**4.76**	**5.67**	**5.53**	**4.20**	**4.35**	**4.17**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0025	< 0.0028
Potassium	mg/L	NS	NS	9.14	8.38	9.27	9.57	8.25	9.11	8.71	7.38	11.9	11.6
Selenium	mg/L	**0.05**	NS	0.0216	< 0.0097	< 0.0097	0.0298	< 0.0093	0.0206	0.0110 J	0.0206	< 0.0097	< 0.0097
Silver	mg/L	0.1	NS	< 0.0019	0.0108	< 0.0019	< 0.0019	< 0.0024	0.0036 J	0.0102	< 0.0024	< 0.0019	< 0.0019
Sodium	mg/L	NS	NS	229	205	217	228	205	217	220	203	173	175
Thallium	mg/L	**0.002**	NS	**0.0203 J**	**0.0106 J**	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	**0.0111 J**	< 0.0094
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	0.0027 J	< 0.0016	0.0030 J	< 0.0016	0.0024 J	< 0.0016	< 0.0023	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0054	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	0.0200 J	0.0114 J
Metals													
Cyanide	mg/L	0.2	NS	0.0060 J	< 0.0050	< 0.0050	< 0.0050					< 0.0050	< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000080	< 0.000082	< 0.000081	< 0.000081					< 0.000081	< 0.000081

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-FD 14-Jul-16 N	MW-FD 27-Oct-16 N	MW-FD 19-Jan-17 N	MW-FD 07-Apr-17 N	MW-FD 17-Aug-17 N	MW-FD 26-Oct-17 N	MW-FD 22-Jan-18 N	MW-FD 17-Apr-18 N	MW-FDD 08-Jun-16 N	MW-FDD 14-Jul-16 N
Aroclor 1221	mg/L	0.0017	0.053	< 0.000080	< 0.000082	< 0.000081	< 0.000081					< 0.000081	< 0.000081
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016	< 0.00016	< 0.00016					< 0.00016	< 0.00016
Aroclor 1242	mg/L	0.0017	NS	< 0.000080	< 0.000082	< 0.000081	< 0.000081					< 0.000081	< 0.000081
Aroclor 1248	mg/L	0.0017	NS	< 0.000080	< 0.000082	< 0.000081	< 0.000081					< 0.000081	< 0.000081
Aroclor 1254	mg/L	0.0017	NS	< 0.000080	< 0.000082	< 0.000081	< 0.000081					< 0.000081	< 0.000081
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012	< 0.00012					< 0.00012	< 0.00012
Total PCBs	mg/L	0.0005	NS	< 0.000080	< 0.000082	< 0.000081	< 0.000081					< 0.000081	< 0.000081
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.0005 J	0.0005 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0006 J	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	0.0002 J	0.0002 J	< 0.0001	0.0001 J	0.0001 J	0.0001 J	0.0001 J	0.0001 J	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	0.0001 J	< 0.0001	0.0001 J	< 0.0001	0.0001 J	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	0.0003 J	0.0002 J	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.001	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002 J	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0006 J	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.03	0.004 J
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.03	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.03	0.007 J
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	0.083 J	0.065
Benzene	mg/L	0.005	0.35	0.0006 J	0.0006 J	0.0007 J	0.0006 J	0.0005 J	0.0006 J	0.0006 J	< 0.0005	< 0.005	0.001 J

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	1.5	0.085	0.03	0.073	0.14	0.08	0.045	0.036	**250**	**240**
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.005 J	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	0.003
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.84 J	0.4
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	0.0009 J
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.02	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	0.006 J	0.007 J	0.009 J	0.006 J	0.007 J	0.006 J	0.007 J	0.005 J	< 0.04	0.006 J
Toluene	mg/L	1	430	0.007	0.005	0.005	0.005	0.008	0.004	0.004	0.007	0.007 J	0.006
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005
Xylenes	mg/L	10	12	0.0006 J	0.0006 J	0.0007 J	< 0.0005	0.0006 J	0.0007 J	< 0.0005	< 0.0005	< 0.005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-FD 14-Jul-16 N	MW-FD 27-Oct-16 N	MW-FD 19-Jan-17 N	MW-FD 07-Apr-17 N	MW-FD 17-Aug-17 N	MW-FD 26-Oct-17 N	MW-FD 22-Jan-18 N	MW-FD 17-Apr-18 N	MW-FDD 08-Jun-16 N	MW-FDD 14-Jul-16 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894	< 0.0398	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0077	**0.0086 J**	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0092	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0096	**0.0102 J**	< 0.0096	< 0.0096	< 0.0094	< 0.01	< 0.0100
Barium	mg/L	2	NS	0.0386	0.0367	0.0327	0.0301	0.0303	0.0287	0.0276	0.0499	0.0243	0.0249
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	**0.0065**	**0.0068**	**0.0086**
Cadmium	mg/L	**0.005**	NS	< 0.00049	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00076	< 0.00091	< 0.00090
Calcium	mg/L	NS	NS	453	471	485	453	434	457	478	287	282	264
Chromium	mg/L	**0.1**	NS	0.0024 J	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0025	< 0.0023	< 0.0023
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0020	< 0.0021	< 0.0021
Copper	mg/L	1	NS	0.0085 J	< 0.0041	< 0.0041	< 0.0040	< 0.0040	0.0103	0.0049 J	< 0.0027	< 0.0022	< 0.0022
Iron	mg/L	NS	NS	31.8	33.5	29.9	28.5	31.1	28.0	27.3	138	147	107
Lead	mg/L	**0.005**	NS	< 0.0310	< 0.0062	**0.0077 J**	**0.0109 J**	< 0.00011	< 0.00011	< 0.00011	< 0.0100	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	55.6	56.9	62.3	56.4	55.7	57.9	59.9	65.2	59.4	57.5
Manganese	mg/L	**0.3**	NS	**4.35**	**4.38**	**4.74**	**4.47**	**4.50**	**4.74**	**4.71**	**10.2**	**12.6**	**13.1**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000028	0.000080 J	< 0.000056
Nickel	mg/L	**0.1**	NS	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0051	< 0.0056	< 0.0056
Potassium	mg/L	NS	NS	9.70	9.79	9.57	8.77	8.74	8.60	9.11	14.3	10.8	10.9
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	0.0102 J	< 0.0093	< 0.0093	0.0204	0.0113 J	< 0.0059	< 0.0094	< 0.0094
Silver	mg/L	0.1	NS	0.0027 J	< 0.0019	< 0.0019	< 0.0024	0.0028 J	< 0.0024	< 0.0024	< 0.0020	< 0.0016	< 0.0016
Sodium	mg/L	NS	NS	172	182	201	182	181	193	196	264	328	348
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0099	< 0.0135	**0.0172 J**
Vanadium	mg/L	**0.0082**	NS	< 0.0016	0.0018 J	0.0023 J	0.0030 J	< 0.0016	0.0024 J	< 0.0016	0.0016 J	< 0.0015	0.0042 J
Zinc	mg/L	**2**	NS	< 0.0054	< 0.0054	< 0.0054	< 0.0065	0.0150 J	< 0.0065	< 0.0065	< 0.0048	< 0.0081	< 0.0081
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050							
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000081	< 0.000081	< 0.000081					< 0.00010	< 0.000098	

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000081	< 0.000081	< 0.000081					< 0.00017	< 0.000098	
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016	< 0.00016					< 0.00010	< 0.000098	
Aroclor 1242	mg/L	0.0017	NS	< 0.000081	< 0.000081	< 0.000081					< 0.00010	< 0.000098	
Aroclor 1248	mg/L	0.0017	NS	< 0.000081	< 0.000081	< 0.000081					< 0.00010	< 0.000098	
Aroclor 1254	mg/L	0.0017	NS	< 0.000081	< 0.000081	< 0.000081					< 0.00010	< 0.000098	
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012					< 0.00010	< 0.000098	
Total PCBs	mg/L	0.0005	NS	< 0.000081	< 0.000081	< 0.000081							
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.021	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-FDD 27-Oct-16 N	MW-FDD 19-Jan-17 N	MW-FDD 07-Apr-17 N	MW-FDD 17-Aug-17 N	MW-FDD 26-Oct-17 N	MW-FDD 22-Jan-18 N	MW-FDD 17-Apr-18 N	MW-GD 09-Jun-04 N	MW-GD 17-Jan-07 N	MW-GD 18-Mar-08 N
Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	0.001	0.001	0.001	0.002	0.001	0.002	0.001	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	0.0005 J	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.8	< 0.08	< 0.4
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.8	< 0.08	< 0.4
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.8	< 0.08	< 0.4
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
2-Butanone	mg/L	4	49,000	0.004 J	< 0.15	< 0.3	< 0.003	< 0.003	< 0.015	< 0.003	< 3	< 0.3	< 1.5
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.15	< 0.3	< 0.003	< 0.003	< 0.015	< 0.003	< 3	< 0.3	< 1.5
4-Methyl-2-pentanone	mg/L	9.3	13,000	0.003 J	< 0.15	< 0.3	< 0.003	< 0.003	< 0.015	< 0.003	< 3	< 0.3	< 1.5
Acetone	mg/L	110	470,000	0.057	< 0.3	< 0.6	0.013 J	0.018 J	< 0.03	0.007 J	< 6	< 0.6	< 3
Benzene	mg/L	0.005	0.35	0.001	< 0.025	< 0.05	0.002	0.001	< 0.003	0.001	< 0.5	< 0.05	< 0.25

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
Bromoform	mg/L	0.08	30	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
Carbon disulfide	mg/L	**6.2**	**25**	**340**	**200**	**480**	**400**	**230**	**430**	**260**	**360**	**190**	**430 E**
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.8	< 0.08	< 0.4
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
Chloroform	mg/L	0.08	0.18	0.002	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.8	< 0.08	< 0.4
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.8	< 0.08	< 0.4
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
Ethanol	mg/L	NS	NS	< 0.05	< 2.5	< 5	0.052 J	0.051 J	< 0.25	< 0.05			
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.05	< 0.1	< 0.001	< 0.001	< 0.005	< 0.001			
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.8	< 0.08	< 0.4
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
Methyl chloride	mg/L	0.03	0.81	0.0007 J	< 0.025	< 0.05	< 0.0005	0.0009 J	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.1	< 0.2	< 0.002	< 0.0005	< 0.003	< 0.0005	< 2	< 0.2	< 1
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.1	< 0.2	< 0.002	< 0.002	< 0.01	< 0.002			
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 5	< 10	< 0.1	< 0.1	< 0.5	< 0.1			
Styrene	mg/L	0.1	220	< 0.001	< 0.05	< 0.1	< 0.001	< 0.001	< 0.005	< 0.001	< 1	< 0.1	< 0.5
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.8	< 0.08	< 0.4
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.2	< 0.4	< 0.004	< 0.004	< 0.02	< 0.004			
Toluene	mg/L	1	430	0.004	< 0.025	< 0.05	0.003	0.002	< 0.003	0.002	< 0.7	< 0.07	< 0.35
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.8	< 0.08	< 0.4
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	**0.015**	< 0.0005	< 1	< 0.1	< 0.5
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 1	< 0.1	< 0.5
Xylenes	mg/L	10	12	< 0.0005	< 0.025	< 0.05	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.8	< 0.08	< 0.4

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000									< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0834	< 0.0828	< 0.0929	< 0.0868
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053	< 0.0310	< 0.0077
Arsenic	mg/L	**0.01**	NS	< 0.0102	< 0.0100	< 0.0100	**0.0130 J**	< 0.0072	< 0.0072	< 0.0098	**0.0125 J**	< 0.0078	< 0.0097
Barium	mg/L	2	NS	0.0222	0.0259	0.0223	0.0236	0.0232	0.0242	0.0252	0.0262	0.0239	0.0231
Beryllium	mg/L	**0.004**	NS	**0.0073**	**0.0097**	**0.0047 J**	0.0024 J	0.0036 J	0.0030 J	**0.0108**	**0.0056**	**0.0042 J**	**0.0060**
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	**0.0068**	**0.0085**	< 0.0100	< 0.00076	< 0.00064	< 0.00049
Calcium	mg/L	NS	NS	243	279	241	250	238	264	236	224	215	198
Chromium	mg/L	**0.1**	NS	< 0.0030	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	0.0049 J	0.0038 J	0.0062 J	0.0024 J
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0023	< 0.0013	< 0.00090	< 0.0019
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	0.0035 J	< 0.0027	0.0079 J	< 0.0205
Iron	mg/L	NS	NS	112	115	149	294	253	264	179	203	241	186
Lead	mg/L	**0.005**	NS	< 0.0345	< 0.0069	< 0.0069	**0.0079 J**	< 0.0069	< 0.0069	**0.0099 J**	**0.0105 J**	< 0.0051	< 0.124
Magnesium	mg/L	NS	NS	61.2	57.4	52.2	56.6	54.6	60.6	54.2	49.7	48.7	43.9
Manganese	mg/L	**0.3**	NS	**11.9**	**12.4**	**11.8**	**13.0**	**12.1**	**12.6**	**12.5**	**12.7**	**12.0**	**11.2**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.00028	< 0.000056	< 0.000056	0.000066 J	< 0.00056	< 0.000050	< 0.00006	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0056	< 0.0056	< 0.0056	< 0.0018	< 0.0018	0.0070 J	0.0045 J	< 0.0015	< 0.0025	< 0.0140
Potassium	mg/L	NS	NS	18.2	13.3	9.14	10.9	9.73	10.0	9.02	8.07	8.35	7.15
Selenium	mg/L	**0.05**	NS	< 0.0107	< 0.0107	< 0.0107	< 0.0089	< 0.0089	0.0192 J	< 0.0089	< 0.0084	< 0.0097	< 0.0097
Silver	mg/L	0.1	NS	< 0.0022	0.0047 J	< 0.0022	< 0.0023	< 0.0023	0.0062	< 0.0023	< 0.0021	< 0.0018	0.0225
Sodium	mg/L	NS	NS	332	335	363	328	342	336	328	334	305	289
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0700	**0.0282 J**	< 0.0140	< 0.0140	< 0.0140	< 0.0054	**0.0392**	**0.0197 J**
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	< 0.0125	< 0.0025	< 0.0025	0.0056	0.0042 J	< 0.002	0.0031 J	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.0088 J	< 0.0081	< 0.0081	< 0.002	< 0.0042	< 0.0054
Metals													
Cyanide	mg/L	0.2	NS									< 0.0050	< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS									< 0.000081	< 0.000080

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Aroclor 1221	mg/L	0.0017	0.053									< 0.000081	< 0.000080
Aroclor 1232	mg/L	0.0017	0.055									< 0.00016	< 0.00016
Aroclor 1242	mg/L	0.0017	NS									< 0.000081	< 0.000080
Aroclor 1248	mg/L	0.0017	NS									< 0.000081	< 0.000080
Aroclor 1254	mg/L	0.0017	NS									< 0.000081	< 0.000080
Aroclor 1260	mg/L	0.0017	NS									< 0.00012	< 0.00012
Total PCBs	mg/L	0.0005	NS									< 0.000081	< 0.000080
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.00052
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.00041
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0021
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00052
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0021
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0021
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0021
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0021
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0021
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0052
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0021
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0052
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00052
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.0021
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.00052
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001	< 0.0010
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.00052
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.00010
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.0005	< 0.1
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.0005	< 0.1
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0008	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.0005	< 0.1
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
2-Butanone	mg/L	4	49,000	0.003 J	< 0.003	< 0.6	< 3	0.005 J	< 0.6	< 3	< 0.003	< 0.003	< 0.6
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.6	< 3	< 0.003	< 0.6	< 3	< 0.003	< 0.003	< 0.6
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.6	< 3	< 0.003	< 0.6	< 3	< 0.003	< 0.003	< 0.6
Acetone	mg/L	110	470,000	0.021	< 0.006	< 1.2	< 6	0.037	< 1.2	< 6	< 0.006	0.01 J	< 1.2
Benzene	mg/L	0.005	0.35	0.005 J	0.002 J	< 0.1	< 0.5	0.003 J	< 0.1	< 0.5	0.002 J	0.001	< 0.1

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Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Carbon disulfide	mg/L	**6.2**	**25**	**290**	**360**	**290**	**320**	**300**	**360**	**250**	**240**	**81**	**100**
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.0005	< 0.1
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.0005	< 0.1
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.0005	< 0.1
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Ethanol	mg/L	NS	NS									< 0.05	< 10
Ethyl acetate	mg/L	0.62	290									< 0.001	< 0.2
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.0005	< 0.1
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.4	< 2	< 0.002	< 0.4	< 2	< 0.002	< 0.002	< 0.4
n-Butyl acetate	mg/L	NS	NS									< 0.002	< 0.4
n-Butyl alcohol	mg/L	12	NS									< 0.1	< 20
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.001	< 0.2
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0008	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.0005	< 0.1
Tetrahydrofuran	mg/L	0.13	0.13									< 0.004	< 0.8
Toluene	mg/L	1	430	< 0.0007	0.001 J	< 0.14	< 0.7	< 0.0007	< 0.14	< 0.7	< 0.0007	0.0008 J	< 0.1
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.0005	< 0.1
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.2	< 1	< 0.001	< 0.2	< 1	< 0.001	< 0.0005	< 0.1
Xylenes	mg/L	10	12	< 0.0008	0.001 J	< 0.16	< 0.8	< 0.0008	< 0.16	< 0.8	< 0.0008	< 0.0005	< 0.1

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-GD 25-Jun-08 N	MW-GD 29-Dec-08 N	MW-GD 24-Mar-09 N	MW-GD 16-Jun-09 N	MW-GD 29-Sep-09 N	MW-GD 23-Dec-09 N	MW-GD 13-Jan-11 N	MW-GD 22-Aug-13 N	MW-GD 08-Jun-16 N	MW-GD 28-Oct-16 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-GD 19-Jan-17 N	MW-GD 07-Apr-17 N	MW-GD 17-Aug-17 N	MW-GD 07-Nov-17 N	MW-GD 15-Jan-18 N	MW-GD 13-Apr-18 N	MW-HD 16-Jan-07 N	MW-HD 18-Mar-08 N	MW-HD 23-Jun-08 N	MW-HD 23-Dec-08 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 Z				
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894	< 0.0802	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.01	< 0.0100	< 0.0102	< 0.0100
Barium	mg/L	2	NS	0.0208	0.0207	0.0214	0.0223	0.0218	0.0212	0.0240	0.0207	0.0219	0.0163
Beryllium	mg/L	**0.004**	NS	**0.0057**	0.0036 J	< 0.0020	0.0037 J	**0.0042 J**	< 0.0020	< 0.00094	< 0.00090	< 0.00090	< 0.00090
Cadmium	mg/L	**0.005**	NS	0.0027 J	< 0.00049	< 0.0018	< 0.0018	< 0.0018	**0.0073**	< 0.00091	< 0.00090	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	195	205	193	195	184	198	136	128	148	110
Chromium	mg/L	**0.1**	NS	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0023	< 0.0023	< 0.0030	< 0.0030
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	0.0080	< 0.0021	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0041	< 0.0041	< 0.0040	< 0.0200	0.0075 J	0.0145	< 0.0022	< 0.0022	< 0.0027	< 0.0027
Iron	mg/L	NS	NS	189	241	257	235	250	287	223	187	185	157
Lead	mg/L	**0.005**	NS	**0.0103 J**	**0.0104 J**	**0.0078 J**	< 0.00011	< 0.00011	< 0.00011	< 0.0069	< 0.0069	< 0.0345	< 0.0069
Magnesium	mg/L	NS	NS	44.7	49.2	45.4	46.5	44.1	47.2	52.4	47.2	55.3	46.7
Manganese	mg/L	**0.3**	NS	**11.0**	**12.8**	**9.61**	**9.93**	**9.66**	**10.3**	**9.85**	**7.07**	**7.12**	**6.15**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	0.000072 J	< 0.000050	< 0.000050	0.000092 J	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0067 J	< 0.0056	< 0.0056	0.0070 J
Potassium	mg/L	NS	NS	7.45	7.98	7.56	8.37	7.42	8.26	12.5	7.63	11.4	13.8
Selenium	mg/L	**0.05**	NS	< 0.0097	0.0351	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0094	< 0.0094	< 0.0107	< 0.0107
Silver	mg/L	0.1	NS	< 0.0019	< 0.0019	< 0.0024	0.0029 J	< 0.0024	< 0.0024	< 0.0016	< 0.0016	< 0.0022	0.0055
Sodium	mg/L	NS	NS	283	315	291	311	290	312	219	249	247	338
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0135	**0.0224**	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	0.0052	< 0.0016	0.0062	0.0037 J	< 0.0016	< 0.0016	< 0.0015	< 0.0015	0.0042 J	0.0037 J
Zinc	mg/L	**2**	NS	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	0.0127 J	< 0.0081	< 0.0081	< 0.0081
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050								
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000082	< 0.000081					< 0.000094			

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000082	< 0.000081					< 0.000094			
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016					< 0.000094			
Aroclor 1242	mg/L	0.0017	NS	< 0.000082	< 0.000081					< 0.000094			
Aroclor 1248	mg/L	0.0017	NS	< 0.000082	< 0.000081					< 0.000094			
Aroclor 1254	mg/L	0.0017	NS	< 0.000082	< 0.000081					< 0.000094			
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012					< 0.000094			
Total PCBs	mg/L	0.0005	NS	< 0.000082	< 0.000081								
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	0.002 J	0.002 J	< 0.001
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.019	< 0.021	< 0.02
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	0.0005 J	0.0006 J	0.001 J	0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	0.002 J
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.008	< 0.0008	< 0.0008	0.001 J
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.15	< 0.15	< 0.003	< 0.003	< 0.15	< 0.003	< 0.03	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.15	< 0.15	< 0.003	< 0.003	< 0.15	< 0.003	< 0.03	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.15	< 0.15	< 0.003	< 0.003	< 0.15	< 0.003	< 0.03	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.3	< 0.3	0.016 J	0.018 J	< 0.3	0.025	< 0.06	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.025	< 0.025	0.001	0.001 J	< 0.025	0.001 J	< 0.005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	**100**	**86**	**49**	**50**	**41**	**14**	4.4	0.06	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.008	< 0.0008	< 0.0008	< 0.0008
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 2.5	< 2.5	< 0.05	< 0.05	< 2.5	< 0.05				
Ethyl acetate	mg/L	0.62	290	< 0.05	< 0.05	< 0.001	< 0.001	< 0.05	< 0.001				
Ethylbenzene	mg/L	0.7	0.86	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.1	< 0.1	< 0.002	< 0.0005	< 0.025	< 0.0005	< 0.02	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.1	< 0.1	< 0.002	< 0.002	< 0.1	< 0.002				
n-Butyl alcohol	mg/L	12	NS	< 5	< 5	< 0.1	< 0.1	< 5	< 0.1				
Styrene	mg/L	0.1	220	< 0.05	< 0.05	< 0.001	< 0.001	< 0.05	< 0.001	< 0.01	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.008	< 0.0008	< 0.0008	0.001 J
Tetrahydrofuran	mg/L	0.13	0.13	< 0.2	< 0.2	< 0.004	< 0.004	< 0.2	< 0.004				
Toluene	mg/L	1	430	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.008	< 0.0008	< 0.0008	< 0.0008
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	0.002 J	0.002 J	0.005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.01	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.025	< 0.025	< 0.0005	< 0.0005	< 0.025	< 0.0005	< 0.008	< 0.0008	< 0.0008	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-GD 19-Jan-17 N	MW-GD 07-Apr-17 N	MW-GD 17-Aug-17 N	MW-GD 07-Nov-17 N	MW-GD 15-Jan-18 N	MW-GD 13-Apr-18 N	MW-HD 16-Jan-07 N	MW-HD 18-Mar-08 N	MW-HD 23-Jun-08 N	MW-HD 23-Dec-08 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-HD 23-Dec-08 FD	MW-HD 20-Mar-09 N	MW-HD 11-Jun-09 N	MW-HD 23-Sep-09 N	MW-HD 17-Dec-09 N	MW-HD 17-Dec-09 FD	MW-HD 11-Jan-11 N	MW-HD 11-Jan-11 FD	MW-HD 19-Aug-13 N	MW-HD 27-May-16 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000										< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0802	0.118 J	< 0.0802	< 0.0834	0.105 J	< 0.0828	< 0.0929
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0100	< 0.0053	< 0.0062
Arsenic	mg/L	**0.01**	NS	< 0.0100	< 0.0100	< 0.0072	< 0.0072	< 0.0072	< 0.0072	< 0.0098	< 0.0098	< 0.0068	< 0.0078
Barium	mg/L	2	NS	0.0167	0.0168	0.0180	0.0162	0.0169	0.0174	0.0187	0.0188	0.0235	0.0168
Beryllium	mg/L	**0.004**	NS	< 0.00090	< 0.00090	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	0.00082 J	< 0.0011
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	0.0024 J	0.0037 J	0.0038 J	0.0024 J	0.0031 J	0.0016 J	< 0.00064
Calcium	mg/L	NS	NS	112	124	131	120	113	117	107	110	112	86.2
Chromium	mg/L	**0.1**	NS	< 0.0030	< 0.0030	< 0.0034	< 0.0034	< 0.0034	< 0.0034	< 0.0034	0.0040 J	0.0024 J	0.0059 J
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0023	< 0.0023	< 0.0013	< 0.00090
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0135	< 0.0135	< 0.0027	< 0.0027	< 0.0027	0.0083 J
Iron	mg/L	NS	NS	166	154	162	138	134	140	122	124	174	171
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	**0.0090 J**	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051
Magnesium	mg/L	NS	NS	47.8	44.5	44.7	42.4	43.9	45.6	36.3	37.2	42.8	47.6
Manganese	mg/L	**0.3**	NS	**6.28**	**6.35**	**6.70**	**6.09**	**5.79**	**6.00**	**6.21**	**6.29**	**7.24**	**10.2**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.000050	< 0.00006	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0072 J	< 0.0056	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.0030	< 0.0030	< 0.0015	< 0.0025
Potassium	mg/L	NS	NS	13.6	8.28	8.10	8.88	7.73	7.86	8.42	8.81	6.79	8.54
Selenium	mg/L	**0.05**	NS	< 0.0107	< 0.0107	< 0.0089	< 0.0089	0.010 J	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097
Silver	mg/L	0.1	NS	0.0060	< 0.0022	< 0.0023	< 0.0023	< 0.0023	< 0.0023	0.0027 J	0.0027 J	< 0.0021	0.0024 J
Sodium	mg/L	NS	NS	330	339	314	368	294	292	365	373	240	281
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	**0.0181 J**
Vanadium	mg/L	**0.0082**	NS	0.0039 J	< 0.0025	< 0.0025	< 0.0025	0.0040 J	0.0039 J	0.0048 J	< 0.0025	0.0024 J	0.0053
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.0095 J	< 0.0081	0.0043 J	< 0.0042
Metals													
Cyanide	mg/L	0.2	NS										< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS										< 0.000081

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-HD 23-Dec-08 FD	MW-HD 20-Mar-09 N	MW-HD 11-Jun-09 N	MW-HD 23-Sep-09 N	MW-HD 17-Dec-09 N	MW-HD 17-Dec-09 FD	MW-HD 11-Jan-11 N	MW-HD 11-Jan-11 FD	MW-HD 19-Aug-13 N	MW-HD 27-May-16 N
Aroclor 1221	mg/L	0.0017	0.053										< 0.000081
Aroclor 1232	mg/L	0.0017	0.055										< 0.00016
Aroclor 1242	mg/L	0.0017	NS										< 0.000081
Aroclor 1248	mg/L	0.0017	NS										< 0.000081
Aroclor 1254	mg/L	0.0017	NS										< 0.000081
Aroclor 1260	mg/L	0.0017	NS										< 0.00012
Total PCBs	mg/L	0.0005	NS										< 0.000081
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0009 J	0.002
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.019	< 0.021	< 0.02	< 0.02	< 0.02	< 0.019	< 0.01	< 0.011	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	**0.005 J**	**0.004 J**	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.002 J	0.002 J	0.001 J	0.001 J	0.001 J	0.002 J	0.001 J	0.001 J	< 0.001	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	0.001 J	0.001 J	0.001 J	0.0009 J	0.001 J	0.001 J	< 0.0008	< 0.0008	< 0.0008	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-HD 23-Dec-08 FD	MW-HD 20-Mar-09 N	MW-HD 11-Jun-09 N	MW-HD 23-Sep-09 N	MW-HD 17-Dec-09 N	MW-HD 17-Dec-09 FD	MW-HD 11-Jan-11 N	MW-HD 11-Jan-11 FD	MW-HD 19-Aug-13 N	MW-HD 27-May-16 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**15**	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Ethanol	mg/L	NS	NS										< 0.05
Ethyl acetate	mg/L	0.62	290										< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS										< 0.002
n-Butyl alcohol	mg/L	12	NS										< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	0.001 J	0.001 J	0.001 J	0.001 J	0.001 J	0.001 J	< 0.0008	< 0.0008	< 0.0008	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13										< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	0.005	0.005 J	0.004 J	0.004 J	0.005 J	0.005 J	0.002 J	0.003 J	< 0.001	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-HD 23-Dec-08 FD	MW-HD 20-Mar-09 N	MW-HD 11-Jun-09 N	MW-HD 23-Sep-09 N	MW-HD 17-Dec-09 N	MW-HD 17-Dec-09 FD	MW-HD 11-Jan-11 N	MW-HD 11-Jan-11 FD	MW-HD 19-Aug-13 N	MW-HD 27-May-16 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894	0.123 J	0.158 J	< 0.0868
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0062	< 0.0077	< 0.0077
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096	**0.0101 J**	0.0090 J	< 0.0097	< 0.0097
Barium	mg/L	2	NS	0.0181	0.0174	0.0173	0.0166	0.0165	0.0163	0.0178	0.0307	0.0400	0.0252
Beryllium	mg/L	**0.004**	NS	< 0.00067	0.00086 J	0.00070 J	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0011	< 0.00067	< 0.00067
Cadmium	mg/L	**0.005**	NS	0.0028 J	**0.0066**	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00064	0.00049 J	< 0.00049
Calcium	mg/L	NS	NS	85.8	79.7	84.6	79.8	77.4	79.0	83.3	40.4	44.6	56.7
Chromium	mg/L	**0.1**	NS	< 0.0018	< 0.0018	< 0.0018	0.0048 J	< 0.0033	< 0.0033	< 0.0033	0.0131 J	0.0019 J	0.0077 J
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.00090	< 0.0019	< 0.0019
Copper	mg/L	1	NS	0.0149	< 0.0041	< 0.0041	< 0.0200	< 0.0040	< 0.0040	0.0099 J	0.0048 J	< 0.0041	< 0.0041
Iron	mg/L	NS	NS	169	160	167	168	159	153	169	0.0709 J	0.113 J	< 0.0747
Lead	mg/L	**0.005**	NS	< 0.0062	< 0.0062	< 0.0062	**0.0406**	0.00012 J	< 0.00011	< 0.00011	< 0.0051	< 0.0062	< 0.0062
Magnesium	mg/L	NS	NS	46.0	46.1	46.8	45.0	42.9	42.6	45.9	8.50	6.93	8.25
Manganese	mg/L	**0.3**	NS	**10.0**	**10.1**	**9.78**	**9.68**	**9.72**	**9.75**	**10.1**	**0.319**	0.202	0.0426
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0140	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0031 J	< 0.0028	0.0054 J
Potassium	mg/L	NS	NS	8.37	8.26	8.58	8.77	7.88	8.21	8.57	40.5	18.4	12.1
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	0.0154 J	0.0132 J	0.0227	< 0.0093	< 0.0093	0.0156 J	< 0.0097	< 0.0097
Silver	mg/L	0.1	NS	< 0.0019	< 0.0019	< 0.0019	< 0.0024	0.0042 J	< 0.0024	< 0.0024	< 0.0018	< 0.0019	< 0.0019
Sodium	mg/L	NS	NS	275	269	269	270	256	280	274	425	323	316
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0094	**0.0171 J**	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0084	< 0.0094	< 0.0094
Vanadium	mg/L	**0.0082**	NS	0.0048 J	0.0026 J	0.0033 J	0.0023 J	< 0.0016	0.0053	< 0.0016	< 0.0023	0.0017 J	0.0036 J
Zinc	mg/L	**2**	NS	< 0.0054	0.0105 J	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	< 0.0042	0.0148 J	< 0.0054
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050					< 0.0050	< 0.0050	< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000082	< 0.000081	< 0.000082					< 0.000082	< 0.000082	< 0.000081

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000082	< 0.000081	< 0.000082					< 0.000082	< 0.000082	< 0.000081
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016	< 0.00016	< 0.00016					< 0.00016	< 0.00016	< 0.00016
Aroclor 1242	mg/L	0.0017	NS	< 0.000082	< 0.000081	< 0.000082					< 0.000082	< 0.000082	< 0.000081
Aroclor 1248	mg/L	0.0017	NS	< 0.000082	< 0.000081	< 0.000082					< 0.000082	< 0.000082	< 0.000081
Aroclor 1254	mg/L	0.0017	NS	< 0.000082	< 0.000081	< 0.000082					< 0.000082	< 0.000082	< 0.000081
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012					< 0.00012	< 0.00012	< 0.00012
Total PCBs	mg/L	0.0005	NS	< 0.000082	< 0.000081	< 0.000082					< 0.000082	< 0.000082	< 0.000081
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	< 0.0005	< 0.00050	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.00040	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0003 J	< 0.0001	< 0.00010	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Caprolactam	mg/L	NS	NS										

Table 6
Groundwater Sample Summary - 2004-2018
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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0004 J	< 0.0001	< 0.00010	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.002	0.001	0.0005 J
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0006 J	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	0.056	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002 J	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0005 J	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.003	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.003	0.003	0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0006 J	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-I3 05-Apr-17 N	MW-I3 16-Aug-17 N	MW-I3 06-Nov-17 N	MW-I3 16-Jan-18 N	MW-I3 17-Apr-18 N	MW-ID 16-Jan-07 N	MW-ID 17-Mar-08 N	MW-ID 23-Jun-08 N	MW-ID 23-Dec-08 N	MW-ID 23-Mar-09 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0					
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	0.305	< 0.0894	0.0912 J	< 0.0894	< 0.0894	< 0.0802	< 0.0802	< 0.0802	< 0.0802	< 0.0802
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0087	0.00057 J	0.00063 J	0.00070 J	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0097
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.01	< 0.0100	< 0.0102	< 0.0100	< 0.0100
Barium	mg/L	2	NS	0.0409	0.0345	0.0526	0.0482	0.0446	0.0198	0.0201	0.0193	0.0209	0.0193
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00094	< 0.00090	< 0.00090	< 0.00090	< 0.00090
Cadmium	mg/L	**0.005**	NS	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00091	< 0.00090	< 0.0020	< 0.0020	< 0.0020
Calcium	mg/L	NS	NS	56.3	57.3	59.4	62.5	61.5	62.5	53.5	49.6	44.4	52.9
Chromium	mg/L	**0.1**	NS	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0023	< 0.0023	< 0.0030	< 0.0030	< 0.0030
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021
Copper	mg/L	1	NS	< 0.0041	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0022	< 0.0022	< 0.0027	< 0.0027	< 0.0027
Iron	mg/L	NS	NS	0.236	< 0.0805	0.189 J	0.173 J	0.290	23.3	17.0	17.7	16.6	16.8
Lead	mg/L	**0.005**	NS	< 0.0062	< 0.0060	0.00021 J	< 0.00011	< 0.00011	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069
Magnesium	mg/L	NS	NS	7.90	6.72	6.05	5.94	6.02	27.1	22.8	20.9	21.1	20.6
Manganese	mg/L	**0.3**	NS	0.0867	0.108	0.146	0.126	0.141	**1.3**	**1.06**	**1.09**	**0.966**	**1.08**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	0.00011 J	< 0.000056	< 0.000056	< 0.000056	< 0.000056
Nickel	mg/L	**0.1**	NS	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0056	< 0.0056	< 0.0056	< 0.0056	< 0.0056
Potassium	mg/L	NS	NS	11.5	13.7	18.4	18.8	28.4	12.1	11.5	8.71	17.5	8.15
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0094	< 0.0094	< 0.0107	< 0.0107	< 0.0107
Silver	mg/L	0.1	NS	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0016	< 0.0016	< 0.0022	< 0.0022	< 0.0022
Sodium	mg/L	NS	NS	296	271	265	267	271	868	783	776	741	879
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0135	< 0.0105	< 0.0140	< 0.0140	< 0.0140
Vanadium	mg/L	**0.0082**	NS	0.0025 J	< 0.0016	< 0.0016	0.0022 J	< 0.0016	< 0.0015	< 0.0015	< 0.0025	< 0.0025	< 0.0025
Zinc	mg/L	**2**	NS	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050									
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000081					< 0.000095				

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-I3 05-Apr-17 N	MW-I3 16-Aug-17 N	MW-I3 06-Nov-17 N	MW-I3 16-Jan-18 N	MW-I3 17-Apr-18 N	MW-ID 16-Jan-07 N	MW-ID 17-Mar-08 N	MW-ID 23-Jun-08 N	MW-ID 23-Dec-08 N	MW-ID 23-Mar-09 N
Aroclor 1221	mg/L	0.0017	0.053	< 0.000081					< 0.000095				
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016					< 0.000095				
Aroclor 1242	mg/L	0.0017	NS	< 0.000081					< 0.000095				
Aroclor 1248	mg/L	0.0017	NS	< 0.000081					< 0.000095				
Aroclor 1254	mg/L	0.0017	NS	< 0.000081					< 0.000095				
Aroclor 1260	mg/L	0.0017	NS	< 0.00012					< 0.000095				
Total PCBs	mg/L	0.0005	NS	< 0.000081									
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.009	0.009	0.007	0.009	0.011
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.019	< 0.02	< 0.02	< 0.02	< 0.021
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	**0.004**	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.001 J	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.0006 J	0.0006 J	0.0008 J	0.0008 J	0.0007 J	0.079	0.069	0.066	0.062	0.06
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.084**	**0.069**	**0.07**	**0.07**	**0.059**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.001 J	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.008	0.014	0.012	0.012	0.016
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05					
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001					
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002					
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1					
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.035**	**0.016**	**0.014**	**0.016**	**0.012**
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004					
Toluene	mg/L	1	430	< 0.0005	0.0007 J	0.0007 J	< 0.0005	0.0006 J	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.002 J	0.003 J	0.002 J	0.002 J	0.003 J
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/L	**0.005**	**0.11**	0.001	0.0009 J	0.001	0.002	0.001	**0.35**	**0.29**	**0.27**	**0.29**	**0.28**
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0008	< 0.0008	< 0.0008	0.0008 J	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-ID 15-Jun-09 N	MW-ID 28-Sep-09 N	MW-ID 22-Dec-09 N	MW-ID 10-Jan-11 N	MW-ID 21-Aug-13 N	MW-ID 06-Jun-16 N	MW-ID 26-Oct-16 N	MW-ID 19-Jan-17 N	MW-ID 07-Apr-17 N	MW-ID 17-Aug-17 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000						< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0802	< 0.0802	< 0.0802	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087
Arsenic	mg/L	**0.01**	NS	< 0.0072	< 0.0072	< 0.0072	< 0.0098	< 0.0068	0.0084 J	< 0.0097	< 0.0097	< 0.0097	< 0.0096
Barium	mg/L	2	NS	0.0203	0.0224	0.0215	0.0201	0.0227	0.0219	0.0230	0.0234	0.0218	0.0230
Beryllium	mg/L	**0.004**	NS	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.00076	< 0.00064	< 0.00049	< 0.00049	< 0.00049	< 0.0018
Calcium	mg/L	NS	NS	46.0	44.4	46.7	41.5	33.9	26.7	27.7	25.0	24.7	24.5
Chromium	mg/L	**0.1**	NS	< 0.0034	< 0.0034	< 0.0034	< 0.0034	0.0019 J	< 0.0020	< 0.0018	< 0.0018	< 0.0018	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0021	< 0.0021	< 0.0021	< 0.0023	0.0017 J	< 0.00090	< 0.0019	< 0.0019	< 0.0019	0.0023 J
Copper	mg/L	1	NS	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0032	< 0.0041	< 0.0041	< 0.0041	< 0.0040
Iron	mg/L	NS	NS	17.2	16.2	18.1	15.8	13.3	11.5	11.6	11.8	11.8	11.4
Lead	mg/L	**0.005**	NS	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0047	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060
Magnesium	mg/L	NS	NS	19.7	18.9	19.6	16.7	14.7	12.5	11.7	11.5	12.3	11.2
Manganese	mg/L	**0.3**	NS	**1.05**	**0.995**	**1.02**	**1.08**	**1.01**	**0.751**	**0.685**	**0.672**	**0.702**	**0.665**
Mercury	mg/L	0.002	NS	< 0.000056	< 0.000056	< 0.000056	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0019 J	< 0.0018	0.0027 J	< 0.0030	0.003 J	< 0.0025	< 0.0028	< 0.0028	0.0030 J	< 0.0040
Potassium	mg/L	NS	NS	8.16	8.02	8.61	8.32	6.55	6.13	5.68	5.97	5.95	6.19
Selenium	mg/L	**0.05**	NS	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0084	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093
Silver	mg/L	0.1	NS	< 0.0023	< 0.0023	< 0.0023	< 0.0023	< 0.0021	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024
Sodium	mg/L	NS	NS	705	731	699	716	618	546	570	534	558	530
Thallium	mg/L	**0.002**	NS	< 0.0140	< 0.0140	< 0.0140	< 0.0140	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137
Vanadium	mg/L	**0.0082**	NS	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.0021 J	< 0.0042	< 0.0054	< 0.0054	< 0.0054	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS						< 0.0050	< 0.0050	< 0.0050	< 0.0050	
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS						< 0.000082	< 0.000082	< 0.000081	< 0.000081	

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Aroclor 1221	mg/L	0.0017	0.053						< 0.000082	< 0.000082	< 0.000081	< 0.000081	
Aroclor 1232	mg/L	0.0017	0.055						< 0.00016	< 0.00016	< 0.00016	< 0.00016	
Aroclor 1242	mg/L	0.0017	NS						< 0.000082	< 0.000082	< 0.000081	< 0.000081	
Aroclor 1248	mg/L	0.0017	NS						< 0.000082	< 0.000082	< 0.000081	< 0.000081	
Aroclor 1254	mg/L	0.0017	NS						< 0.000082	< 0.000082	< 0.000081	< 0.000081	
Aroclor 1260	mg/L	0.0017	NS						< 0.00012	< 0.00012	< 0.00012	< 0.00012	
Total PCBs	mg/L	0.0005	NS						< 0.000082	< 0.000082	< 0.000081	< 0.000081	
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.009	0.009	0.009	0.012	0.011	0.013	0.01	< 0.0006	0.008	0.009
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.001	< 0.001	< 0.001	0.001 J	0.001	0.002	0.002	< 0.0006	0.002	0.002
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.001	< 0.001	< 0.001	< 0.001	0.0008 J	0.001 J	0.001	< 0.0006	0.0008 J	0.001
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.021	< 0.019	< 0.019	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.065	0.061	0.047	0.063	0.05	0.038	0.036	0.029	0.032	0.031
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.065**	**0.073**	**0.048**	**0.07**	**0.046**	**0.039**	**0.038**	**0.033**	**0.033**	**0.032**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	0.0005 J	< 0.0005	< 0.0005	0.0005 J
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-ID 15-Jun-09 N	MW-ID 28-Sep-09 N	MW-ID 22-Dec-09 N	MW-ID 10-Jan-11 N	MW-ID 21-Aug-13 N	MW-ID 06-Jun-16 N	MW-ID 26-Oct-16 N	MW-ID 19-Jan-17 N	MW-ID 07-Apr-17 N	MW-ID 17-Aug-17 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.012	0.014	0.014	0.018	0.022	0.033	0.04	0.039	0.039	0.045
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS						< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290						< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS						< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS						< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	**0.012**	**0.011**	0.005 J	**0.007**	0.003 J	0.0008 J	< 0.0005	< 0.0005	0.0006 J	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13						< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	0.0006 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.002 J	0.003 J	0.002 J	0.004 J	0.005 J	0.006	0.008	0.006	0.006	0.006
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	**0.25**	**0.28**	**0.29**	**0.29**	**0.28**	**0.22**	**0.2**	**0.18**	**0.2**	**0.17**
Vinyl chloride	mg/L	**0.002**	0.052	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0008	< 0.0008	0.0009 J	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-ID 15-Jun-09 N	MW-ID 28-Sep-09 N	MW-ID 22-Dec-09 N	MW-ID 10-Jan-11 N	MW-ID 21-Aug-13 N	MW-ID 06-Jun-16 N	MW-ID 26-Oct-16 N	MW-ID 19-Jan-17 N	MW-ID 07-Apr-17 N	MW-ID 17-Aug-17 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-ID 07-Nov-17 N	MW-ID 15-Jan-18 N	MW-ID 13-Apr-18 N	MW-IDD 07-Jun-16 N	MW-IDD 27-Oct-16 N	MW-IDD 18-Jan-17 N	MW-IDD 05-Apr-17 N	MW-IDD 16-Aug-17 N	MW-IDD 06-Nov-17 N	MW-IDD 16-Jan-18 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0 Z	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS			553							
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS			351							
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS			8.0							
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0894	< 0.0894	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.00045	< 0.00045	< 0.00045	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0096	< 0.0096	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.0262	0.0256	0.0247	0.0439	0.0284	0.0338	0.0276	0.0256	0.0249	0.0217
Beryllium	mg/L	**0.004**	NS	< 0.0020	< 0.0020	< 0.0020	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0018	< 0.0018	< 0.00064	< 0.00049	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	25.7	24.3	25.0	29.5	51.7	48.4	45.5	42.0	42.4	42.4
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0033	< 0.0033	0.0077 J	0.0025 J	0.0072 J	< 0.0018	< 0.0033	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0017	< 0.0017	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017
Copper	mg/L	1	NS	< 0.0040	< 0.0040	< 0.0040	0.0043 J	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040
Iron	mg/L	NS	NS	11.6	11.8	12.0	3.78	6.87	7.68	7.76	6.49	7.46	7.61
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.00011	< 0.00011	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060	< 0.00011	< 0.00011
Magnesium	mg/L	NS	NS	11.4	11.3	11.6	6.55	6.38	6.76	6.62	6.20	6.46	6.28
Manganese	mg/L	**0.3**	NS	**0.692**	**0.654**	**0.670**	**1.61**	**2.88**	**3.36**	**3.47**	**3.84**	**3.71**	**4.01**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0040	< 0.0040	< 0.0040	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040
Potassium	mg/L	NS	NS	6.68	5.81	6.11	46.8	24.4	20.2	17.7	15.3	17.4	14.3
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0093	< 0.0093	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093
Silver	mg/L	0.1	NS	< 0.0024	< 0.0024	< 0.0024	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	540	553	533	271	155	127	114	101	106	97.9
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.00012	< 0.00012	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0065	< 0.0065	< 0.0042	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS				< 0.0050	< 0.0050	< 0.0050	< 0.0050			
Metals, Total													
Iron	mg/L	NS	NS			13.2							
Manganese	mg/L	**0.3**	NS			**0.695**							
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS				< 0.000083	< 0.000087	< 0.000081	< 0.000081			

Table 6
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East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-ID 07-Nov-17 N	MW-ID 15-Jan-18 N	MW-ID 13-Apr-18 N	MW-IDD 07-Jun-16 N	MW-IDD 27-Oct-16 N	MW-IDD 18-Jan-17 N	MW-IDD 05-Apr-17 N	MW-IDD 16-Aug-17 N	MW-IDD 06-Nov-17 N	MW-IDD 16-Jan-18 N
Aroclor 1221	mg/L	0.0017	0.053				< 0.000083	< 0.000087	< 0.000081	< 0.000081			
Aroclor 1232	mg/L	0.0017	0.055				< 0.00017	< 0.00017	< 0.00016	< 0.00016			
Aroclor 1242	mg/L	0.0017	NS				< 0.000083	< 0.000087	< 0.000081	< 0.000081			
Aroclor 1248	mg/L	0.0017	NS				< 0.000083	< 0.000087	< 0.000081	< 0.000081			
Aroclor 1254	mg/L	0.0017	NS				< 0.000083	< 0.000087	< 0.000081	< 0.000081			
Aroclor 1260	mg/L	0.0017	NS				< 0.00012	< 0.00013	< 0.00012	< 0.00012			
Total PCBs	mg/L	0.0005	NS				< 0.000083	< 0.000087	< 0.000081	< 0.000081			
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.007	0.007	0.006	0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	0.002	0.002	0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	0.0008 J	0.0009 J	0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	0.002 J	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.028	0.03	0.027	0.015	0.006	0.003	0.003	0.003	0.002	0.002
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.033**	**0.032**	**0.032**	**0.011**	0.004	0.002	0.002	0.001	0.002	0.001
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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East 10th Street Site
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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	1.8	0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.058	0.055	0.054	0.007	0.006	0.005	0.004	0.004	0.004	0.004
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	0.002	0.0005 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.007	0.007	0.007	0.0008 J	< 0.0005	< 0.0005	< 0.0005	0.001	0.002	0.002
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	**0.14**	**0.16**	**0.14**	**0.07**	**0.019**	**0.012**	**0.009**	**0.006**	0.004	0.005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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East 10th Street Site
Marcus Hook, Pennsylvania

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.00045	**0.0110 J**	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0098	< 0.0068	< 0.0078	**0.0116 J**	< 0.0097	**0.0117 J**	< 0.0096	< 0.0096	**0.0383**
Barium	mg/L	2	NS	0.0232	0.0299	0.0232	0.0209	0.0202	0.0203	0.0192	0.0204	0.0207	0.0245
Beryllium	mg/L	**0.004**	NS	< 0.0020	0.0018 J	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0020	0.0020 J	< 0.00064	0.0035 J	0.0050 J	< 0.00049	0.0032 J	0.0029 J	< 0.0018
Calcium	mg/L	NS	NS	43.7	81.5	111	141	145	163	169	166	183	142
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0034	0.0027 J	0.0062 J	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0023	< 0.0013	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017
Copper	mg/L	1	NS	< 0.0040	< 0.0027	< 0.0027	0.0202	0.0148	< 0.0041	< 0.0041	< 0.0200	< 0.0040	0.0081 J
Iron	mg/L	NS	NS	8.12	197	232	206	215	223	209	203	206	204
Lead	mg/L	**0.005**	NS	< 0.00011	**0.0092 J**	< 0.0047	< 0.0051	**0.0065 J**	**0.0070 J**	< 0.0062	**0.0539**	< 0.00011	< 0.00011
Magnesium	mg/L	NS	NS	6.47	38.7	47.7	56.6	56.3	61.7	64.2	62.2	67.7	55.1
Manganese	mg/L	**0.3**	NS	**4.27**	**3.06**	**2.97**	**2.60**	**2.48**	**2.56**	**2.38**	**2.36**	**2.46**	**2.39**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000060	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	0.000087 J	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0040	0.0053 J	< 0.0015	< 0.0125	< 0.0140	< 0.0140	< 0.0028	< 0.0040	< 0.0040	< 0.0040
Potassium	mg/L	NS	NS	13.0	4.59	4.43	5.22	5.10	5.59	5.87	5.80	6.13	5.18
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0089	0.0120 J	< 0.0485	< 0.0097	< 0.0097	0.0159 J	< 0.0093	< 0.0093	< 0.0093
Silver	mg/L	0.1	NS	< 0.0024	< 0.0023	< 0.0021	0.0030 J	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	95.8	290	244	235	222	206	199	202	196	216
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.0140	**0.0063 J**	**0.0183 J**	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0025	0.0020 J	0.0045 J	0.0035 J	0.0036 J	0.0032 J	< 0.0016	0.0026 J	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0081	< 0.0020	< 0.0042	< 0.0054	< 0.0054	< 0.0054	0.0076 J	0.0093 J	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS				< 0.0050	< 0.0050	< 0.0050	< 0.0050			
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS				< 0.000082	< 0.000083	< 0.000080	< 0.000082			

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Aroclor 1221	mg/L	0.0017	0.053				< 0.000082	< 0.000083	< 0.000080	< 0.000082			
Aroclor 1232	mg/L	0.0017	0.055				< 0.00016	< 0.00017	< 0.00016	< 0.00016			
Aroclor 1242	mg/L	0.0017	NS				< 0.000082	< 0.000083	< 0.000080	< 0.000082			
Aroclor 1248	mg/L	0.0017	NS				< 0.000082	< 0.000083	< 0.000080	< 0.000082			
Aroclor 1254	mg/L	0.0017	NS				< 0.000082	< 0.000083	< 0.000080	< 0.000082			
Aroclor 1260	mg/L	0.0017	NS				< 0.00012	< 0.00013	< 0.00012	< 0.00012			
Total PCBs	mg/L	0.0005	NS				< 0.000082	< 0.000083	< 0.000080	< 0.000082			
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-IDD 17-Apr-18 N	MW-JD 12-Jan-11 N	MW-JD 15-Aug-13 N	MW-JD 26-May-16 N	MW-JD 18-Oct-16 N	MW-JD 05-Jan-17 N	MW-JD 27-Mar-17 N	MW-JD 16-Aug-17 N	MW-JD 01-Nov-17 N	MW-JD 15-Jan-18 N
Carbazole	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.001	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.002	0.001 J	0.001 J	0.002	0.002	0.002	0.002	0.003	0.002	0.005
1,1-Dichloroethene	mg/L	**0.007**	3.8	0.001	< 0.0008	< 0.0008	0.0008 J	0.0009 J	0.0008 J	0.0007 J	< 0.0005	0.001 J	0.003
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-IDD 17-Apr-18 N	MW-JD 12-Jan-11 N	MW-JD 15-Aug-13 N	MW-JD 26-May-16 N	MW-JD 18-Oct-16 N	MW-JD 05-Jan-17 N	MW-JD 27-Mar-17 N	MW-JD 16-Aug-17 N	MW-JD 01-Nov-17 N	MW-JD 15-Jan-18 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.004	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
n-Butyl acetate	mg/L	NS	NS	< 0.002			< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004			< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0005	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.002	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	0.005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.001
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-IDD 17-Apr-18 N	MW-JD 12-Jan-11 N	MW-JD 15-Aug-13 N	MW-JD 26-May-16 N	MW-JD 18-Oct-16 N	MW-JD 05-Jan-17 N	MW-JD 27-Mar-17 N	MW-JD 16-Aug-17 N	MW-JD 01-Nov-17 N	MW-JD 15-Jan-18 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-JD 20-Apr-18 N	MW-JS 12-Jan-11 N	MW-JS 15-Aug-13 N	MW-JS 26-May-16 N	MW-JS 18-Oct-16 N	MW-JS 05-Jan-17 N	MW-JS 27-Mar-17 N	MW-JS 16-Aug-17 N	MW-JS 01-Nov-17 N	MW-JS 15-Jan-18 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	0.542
Antimony	mg/L	**0.006**	NS	< 0.00045	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045
Arsenic	mg/L	**0.01**	NS	**0.0110 J**	< 0.0098	< 0.0068	< 0.0078	**0.0114 J**	< 0.0097	0.0098 J	< 0.0096	< 0.0096	**0.0329**
Barium	mg/L	2	NS	0.0232	0.0466	0.0444	0.0370	0.0349	0.0367	0.0366	0.0350	0.0365	0.0441
Beryllium	mg/L	**0.004**	NS	< 0.0020	0.0016 J	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0020	0.0020 J	< 0.00064	0.0034 J	0.0045 J	< 0.00049	0.0032 J	0.0024 J	< 0.0018
Calcium	mg/L	NS	NS	170	94.9	83.5	82.8	80.2	85.2	86.8	79.7	82.1	85.3
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0034	0.0035 J	0.0060 J	< 0.0018	< 0.0018	< 0.0018	0.0036 J	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0023	< 0.0013	0.0056	< 0.0019	< 0.0019	< 0.0019	< 0.0017	0.0022 J	0.0060
Copper	mg/L	1	NS	0.0124	< 0.0027	< 0.0027	0.0081 J	0.0203	< 0.0041	< 0.0041	< 0.0200	< 0.0040	0.0082 J
Iron	mg/L	NS	NS	215	197	203	185	202	210	162	183	186	185
Lead	mg/L	**0.005**	NS	< 0.00011	**0.0109 J**	< 0.0047	< 0.0051	< 0.0062	**0.0066 J**	< 0.0062	**0.0474**	< 0.00011	0.00096 J
Magnesium	mg/L	NS	NS	64.7	44.5	39.4	39.6	38.4	41.2	40.4	38.4	40.9	41.7
Manganese	mg/L	**0.3**	NS	**2.58**	**3.21**	**2.83**	**2.75**	**2.71**	**2.85**	**2.25**	**2.62**	**2.85**	**2.71**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000060	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	0.000089 J	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0040	0.0107	< 0.0015	< 0.0025	< 0.0140	< 0.0140	< 0.0028	< 0.0040	< 0.0040	< 0.0040
Potassium	mg/L	NS	NS	6.00	11.7	3.51	3.24	3.25	3.30	4.44	3.43	3.41	3.90
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0089	< 0.0084	< 0.0485	< 0.0097	< 0.0097	0.0198 J	< 0.0093	0.0129 J	< 0.0093
Silver	mg/L	0.1	NS	< 0.0024	< 0.0023	< 0.0021	0.0027 J	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	218	240	247	256	262	249	222	255	273	272
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.0140	**0.0060 J**	**0.0117 J**	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0025	0.0025 J	0.0059	0.0048 J	0.0042 J	0.0030 J	0.0030 J	0.0041 J	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0065	0.0116 J	< 0.0020	< 0.0042	< 0.0054	< 0.0054	< 0.0054	0.0071 J	< 0.0065	0.0070 J
Metals													
Cyanide	mg/L	0.2	NS				< 0.0050	< 0.0050	< 0.0050	< 0.0050			
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS				< 0.000083	< 0.000083	< 0.000080	< 0.000081			

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Aroclor 1221	mg/L	0.0017	0.053				< 0.000083	< 0.000083	< 0.000080	< 0.000081			
Aroclor 1232	mg/L	0.0017	0.055				< 0.00017	< 0.00017	< 0.00016	< 0.00016			
Aroclor 1242	mg/L	0.0017	NS				< 0.000083	< 0.000083	< 0.000080	< 0.000081			
Aroclor 1248	mg/L	0.0017	NS				< 0.000083	< 0.000083	< 0.000080	< 0.000081			
Aroclor 1254	mg/L	0.0017	NS				< 0.000083	< 0.000083	< 0.000080	< 0.000081			
Aroclor 1260	mg/L	0.0017	NS				< 0.00012	< 0.00012	< 0.00012	< 0.00012			
Total PCBs	mg/L	0.0005	NS				< 0.000083	< 0.000083	< 0.000080	< 0.000081			
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	0.0002 J	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	0.0004 J	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.001	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.004	0.001 J	0.002 J	0.006	0.006	0.009	0.014	0.016	0.017	0.021
1,1-Dichloroethene	mg/L	**0.007**	3.8	0.003	< 0.0008	< 0.0008	0.003	0.004	**0.008**	**0.012**	**0.013**	**0.015**	**0.019**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	0.0007 J	< 0.0005	0.0008 J	0.0008 J
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	0.0006 J	0.001	0.001	0.002	0.003
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
n-Butyl acetate	mg/L	NS	NS	< 0.002			< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	0.002	0.002	0.002	**0.007**
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004			< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0005	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	0.001	0.005	**0.006**	**0.006**	**0.014**
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0007 J
Xylenes	mg/L	10	12	0.0006 J	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-JD 20-Apr-18 N	MW-JS 12-Jan-11 N	MW-JS 15-Aug-13 N	MW-JS 26-May-16 N	MW-JS 18-Oct-16 N	MW-JS 05-Jan-17 N	MW-JS 27-Mar-17 N	MW-JS 16-Aug-17 N	MW-JS 01-Nov-17 N	MW-JS 15-Jan-18 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-JS 20-Apr-18 N	MW-KD 12-Jan-11 N	MW-KD 22-Aug-13 N	MW-KD 06-Jun-16 N	MW-KD 26-Oct-16 N	MW-KD 17-Jan-17 N	MW-KD 31-Mar-17 N	MW-KD 21-Aug-17 N	MW-KD 07-Nov-17 N	MW-KD 11-Jan-18 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS	341									
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS	38.5									
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS	5.9									
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	< 0.0894	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.00045	< 0.0100	< 0.0053	**0.0093 J**	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045
Arsenic	mg/L	**0.01**	NS	**0.0102 J**	< 0.0098	**0.0205**	< 0.0078	< 0.0097	< 0.0097	< 0.0097	**0.0156 J**	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.0352	0.0354	0.0244	0.0278	0.0250	0.0266	0.0256	0.0255	0.0266	0.0213
Beryllium	mg/L	**0.004**	NS	< 0.0020	0.0018 J	< 0.00067	< 0.0011	< 0.00067	0.00067 J	< 0.00067	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0020	< 0.00076	< 0.00064	< 0.00049	0.0010 J	0.0019 J	< 0.0018	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	86.7	82.8	75	66.4	73.9	79.9	45.8	65.9	58.9	36.5
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0034	0.0039 J	0.0024 J	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0023	< 0.0013	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017
Copper	mg/L	1	NS	0.0128	< 0.0027	< 0.0027	< 0.0032	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040
Iron	mg/L	NS	NS	207	108	97.7	88.7	90.2	94.9	65.6	84.3	79.9	58.0
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.0069	**0.0058 J**	< 0.0051	< 0.0310	< 0.0062	< 0.0062	< 0.0060	< 0.00011	< 0.00011
Magnesium	mg/L	NS	NS	42.2	28.8	25.2	23.6	23.9	25.7	17.3	22.6	20.5	13.8
Manganese	mg/L	**0.3**	NS	**2.84**	**1.25**	**1.08**	**0.973**	**0.980**	**1.05**	**0.765**	**0.933**	**0.898**	**0.651**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0040	< 0.0030	< 0.0015	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040
Potassium	mg/L	NS	NS	3.30	5.25	4.81	4.71	4.51	4.95	3.77	4.64	4.76	3.68
Selenium	mg/L	**0.05**	NS	< 0.0465	< 0.0089	< 0.0084	0.0206	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093
Silver	mg/L	0.1	NS	< 0.0024	< 0.0023	< 0.0021	< 0.0018	0.0052	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	293	303	324	321	289	306	328	302	329	355
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.0140	< 0.0054	**0.0180 J**	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012
Vanadium	mg/L	**0.0082**	NS	0.0017 J	0.0025 J	0.0032 J	0.0032 J	0.0032 J	0.0019 J	< 0.0016	0.0040 J	0.0034 J	0.0022 J
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0081	< 0.002	< 0.0042	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS				< 0.0050	< 0.0050	< 0.0050	< 0.0050			
Metals, Total													
Iron	mg/L	NS	NS	190									
Manganese	mg/L	**0.3**	NS	**2.68**									
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS				< 0.000083	< 0.000081	< 0.000080	< 0.000081			

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-JS 20-Apr-18 N	MW-KD 12-Jan-11 N	MW-KD 22-Aug-13 N	MW-KD 06-Jun-16 N	MW-KD 26-Oct-16 N	MW-KD 17-Jan-17 N	MW-KD 31-Mar-17 N	MW-KD 21-Aug-17 N	MW-KD 07-Nov-17 N	MW-KD 11-Jan-18 N
Aroclor 1221	mg/L	0.0017	0.053				< 0.000083	< 0.000081	< 0.000080	< 0.000081			
Aroclor 1232	mg/L	0.0017	0.055				< 0.00017	< 0.00016	< 0.00016	< 0.00016			
Aroclor 1242	mg/L	0.0017	NS				< 0.000083	< 0.000081	< 0.000080	< 0.000081			
Aroclor 1248	mg/L	0.0017	NS				< 0.000083	< 0.000081	< 0.000080	< 0.000081			
Aroclor 1254	mg/L	0.0017	NS				< 0.000083	< 0.000081	< 0.000080	< 0.000081			
Aroclor 1260	mg/L	0.0017	NS				< 0.00012	< 0.00012	< 0.00012	< 0.00012			
Total PCBs	mg/L	0.0005	NS				< 0.000083	< 0.000081	< 0.000080	< 0.000081			
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	0.062	0.029	0.045	0.023	0.016	0.037	0.022	0.029	0.033
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.001	0.0006 J	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.001	0.0005 J	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.002	< 0.0004	< 0.0004	< 0.00040	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	0.0001 J	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	0.0003 J	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.001	< 0.0005	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	0.027	0.006	0.002	0.001	< 0.001	0.001	< 0.003	< 0.003	0.0009 J
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.021	**0.27**	0.15	0.068	0.058	0.039	0.035	0.047	0.052	0.026
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.021**	**0.26**	**0.14**	**0.071**	**0.058**	**0.039**	**0.032**	**0.047**	**0.051**	**0.018**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	0.002 J	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.006	< 0.003	< 0.015	< 0.015	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.006	< 0.003	< 0.015	< 0.015	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.006	< 0.003	< 0.015	< 0.015	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.012	< 0.006	< 0.03	< 0.03	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-JS 20-Apr-18 N	MW-KD 12-Jan-11 N	MW-KD 22-Aug-13 N	MW-KD 06-Jun-16 N	MW-KD 26-Oct-16 N	MW-KD 17-Jan-17 N	MW-KD 31-Mar-17 N	MW-KD 21-Aug-17 N	MW-KD 07-Nov-17 N	MW-KD 11-Jan-18 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.005	< 0.005	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Chloroethane	mg/L	1.2	440	0.0007 J	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	0.002 J	0.0008 J	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.003	0.024	0.026	0.038	0.041	0.035	0.049	0.04	0.042	0.062
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05			< 0.05	< 0.05	< 0.1	< 0.05	< 0.25	< 0.25	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001			< 0.001	< 0.001	< 0.002	< 0.001	< 0.005	< 0.005	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.004	< 0.002	< 0.01	< 0.003	< 0.0005
n-Butyl acetate	mg/L	NS	NS	< 0.002			< 0.002	< 0.002	< 0.004	< 0.002	< 0.01	< 0.01	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1			< 0.1	< 0.1	< 0.2	< 0.1	< 0.5	< 0.5	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.005	< 0.005	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	**0.012**	**0.23**	**0.1**	**0.081**	**0.056**	**0.024**	**0.04**	**0.024**	**0.017**	**0.015**
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004			< 0.004	< 0.004	< 0.008	< 0.004	< 0.02	< 0.02	< 0.004
Toluene	mg/L	1	430	< 0.0005	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	0.002 J	0.006	0.005	0.006	0.005	0.009	0.005	0.006	0.012
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	**0.019**	**1.2**	**0.54**	**0.31**	**0.25**	**0.22**	**0.27**	**0.24**	**0.24**	**0.27**
Vinyl chloride	mg/L	**0.002**	0.052	0.0007 J	0.001 J	< 0.001	0.0006 J	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	0.0006 J
Xylenes	mg/L	10	12	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.003	< 0.003	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-JS 20-Apr-18 N	MW-KD 12-Jan-11 N	MW-KD 22-Aug-13 N	MW-KD 06-Jun-16 N	MW-KD 26-Oct-16 N	MW-KD 17-Jan-17 N	MW-KD 31-Mar-17 N	MW-KD 21-Aug-17 N	MW-KD 07-Nov-17 N	MW-KD 11-Jan-18 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-KD 11-Apr-18 N	MW-LD 13-Jan-11 N	MW-LD 20-Aug-13 N	MW-LD 27-May-16 N	MW-LD 19-Oct-16 N	MW-LD 10-Jan-17 N	MW-LD 28-Mar-17 N	MW-LD 18-Aug-17 N	MW-LD 30-Oct-17 N	MW-LD 11-Jan-18 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	7.2 J			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894 K2	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	0.668	< 0.0894	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.00045	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0098	0.0073 J	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.0248	0.0196	0.0145	0.0172	0.0202	0.0508	0.0144	0.0228	0.0155	0.0173
Beryllium	mg/L	**0.004**	NS	< 0.0020	0.0016 J	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0020	< 0.00076	< 0.00064	0.00070 J	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	59.4	4.25	3.4	3.40	3.04	2.96	2.71	2.47	2.83	2.99
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0034	< 0.0016	< 0.0020	< 0.0018	< 0.0018	0.0032 J	< 0.0033	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0023	< 0.0013	0.0010 J	< 0.0019	< 0.0019	< 0.0019	0.0020 J	< 0.0017	< 0.0017
Copper	mg/L	1	NS	< 0.0040	< 0.0027	< 0.0027	< 0.0032	< 0.0041	< 0.0041	< 0.0041	0.0043 J	< 0.0040	< 0.0040
Iron	mg/L	NS	NS	77.1	4.66	5.95	6.40	5.89	6.61	5.12	5.82	5.74	6.13
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.0069	< 0.0047	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060	< 0.00011	< 0.00011
Magnesium	mg/L	NS	NS	20.5	3.02	2.67	2.65	2.29	2.51	2.18	2.09	2.27	2.36
Manganese	mg/L	**0.3**	NS	**0.867**	0.289	0.223	0.218	0.192	0.209	0.172	0.167	0.183	0.187
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0040	< 0.0030	< 0.0015	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040
Potassium	mg/L	NS	NS	5.23	4.67	3.12	3.06	3.07	2.90	3.03	2.90	2.72	2.95
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0089	< 0.0084	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093
Silver	mg/L	0.1	NS	0.0060	< 0.0023	< 0.0021	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024
Sodium	mg/L	NS	NS	346	227	209	208	186	195	202	186	186	197
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.0140	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0094	**0.0152 J**	< 0.00012	< 0.00012
Vanadium	mg/L	**0.0082**	NS	0.0033 J	< 0.0025	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016	0.0018 J	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0081	< 0.002	< 0.0042	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS				< 0.0050	< 0.0050	< 0.0050	< 0.0050			
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000082	< 0.000081			

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Aroclor 1221	mg/L	0.0017	0.053				< 0.000082	< 0.000081	< 0.000082	< 0.000081			
Aroclor 1232	mg/L	0.0017	0.055				< 0.00016	< 0.00016	< 0.00016	< 0.00016			
Aroclor 1242	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000082	< 0.000081			
Aroclor 1248	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000082	< 0.000081			
Aroclor 1254	mg/L	0.0017	NS				< 0.000082	< 0.000081	< 0.000082	< 0.000081			
Aroclor 1260	mg/L	0.0017	NS				< 0.00012	< 0.00012	< 0.00012	< 0.00012			
Total PCBs	mg/L	0.0005	NS				< 0.000082	< 0.000081	< 0.000082	< 0.000081			
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	0.029	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-KD 11-Apr-18 N	MW-LD 13-Jan-11 N	MW-LD 20-Aug-13 N	MW-LD 27-May-16 N	MW-LD 19-Oct-16 N	MW-LD 10-Jan-17 N	MW-LD 28-Mar-17 N	MW-LD 18-Aug-17 N	MW-LD 30-Oct-17 N	MW-LD 11-Jan-18 N
Carbazole	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.001	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.003	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.003	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.065	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.066**	0.006	0.006	**0.008**	**0.008**	**0.009**	**0.008**	**0.008**	**0.008**	**0.01**
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.015	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.015	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.015	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.03	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-KD 11-Apr-18 N	MW-LD 13-Jan-11 N	MW-LD 20-Aug-13 N	MW-LD 27-May-16 N	MW-LD 19-Oct-16 N	MW-LD 10-Jan-17 N	MW-LD 28-Mar-17 N	MW-LD 18-Aug-17 N	MW-LD 30-Oct-17 N	MW-LD 11-Jan-18 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.006	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.003	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.003	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	0.05	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.25			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.005			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.003	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
n-Butyl acetate	mg/L	NS	NS	< 0.01			< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.5			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	**0.018**	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.02			< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.003	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	0.008	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	**0.27**	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.003	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0008 J	0.0006 J	0.0006 J	0.0006 J	0.0008 J
Xylenes	mg/L	10	12	< 0.003	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-KD 11-Apr-18 N	MW-LD 13-Jan-11 N	MW-LD 20-Aug-13 N	MW-LD 27-May-16 N	MW-LD 19-Oct-16 N	MW-LD 10-Jan-17 N	MW-LD 28-Mar-17 N	MW-LD 18-Aug-17 N	MW-LD 30-Oct-17 N	MW-LD 11-Jan-18 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0834	< 0.0828	< 0.0929	< 0.0868	< 0.0868	< 0.0868	< 0.0894	0.451	0.202
Antimony	mg/L	**0.006**	NS	< 0.00045	< 0.0100	< 0.0053	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0098	0.0078 J	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096
Barium	mg/L	2	NS	0.0145	0.0485	0.0333	0.0302	0.0332	0.0371	0.0324	0.0331	0.0408	0.0382
Beryllium	mg/L	**0.004**	NS	< 0.0020	0.0015 J	< 0.00067	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.0020	< 0.00076	< 0.00064	< 0.00049	0.00067 J	< 0.00049	< 0.0018	< 0.0018	< 0.0018
Calcium	mg/L	NS	NS	2.65	85.7	105	102	103	99.0	98.3	103	97.9	99.4
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0034	< 0.0016	< 0.0020	< 0.0018	< 0.0018	< 0.0018	< 0.0033	< 0.0033	< 0.0033
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.0023	< 0.0013	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017
Copper	mg/L	1	NS	< 0.0040	0.0043 J	< 0.0027	0.0041 J	< 0.0041	< 0.0041	< 0.0041	< 0.0040	0.0051 J	< 0.0040
Iron	mg/L	NS	NS	5.24	3.53	19.6	12.0	20.9	20.0	22.4	18.6	19.6	22.6
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.0069	< 0.0047	< 0.0051	< 0.0062	< 0.0062	< 0.0062	**0.0117 J**	0.00039 J	0.00020 J
Magnesium	mg/L	NS	NS	2.08	29.0	29.8	29.2	29.8	29.2	28.3	28.6	27.4	28.5
Manganese	mg/L	**0.3**	NS	0.173	**0.481**	**0.414**	**0.308**	**0.469**	**0.416**	**0.427**	**0.399**	**0.401**	**0.405**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.00006	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0040	0.0077 J	0.0043 J	0.0031 J	< 0.0028	0.0041 J	0.0041 J	0.0055 J	< 0.0040	0.0051 J
Potassium	mg/L	NS	NS	2.85	6.44	5.9	6.03	5.84	5.70	5.95	5.96	5.58	5.78
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0089	< 0.0084	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093
Silver	mg/L	0.1	NS	< 0.0024	< 0.0023	< 0.0021	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024	< 0.0024	0.0037 J
Sodium	mg/L	NS	NS	190	44.8	41.9	45.0	44.0	44.7	45.2	43.0	41.1	44.8
Thallium	mg/L	**0.002**	NS	< 0.00012	< 0.0140	< 0.0054	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0025	< 0.002	< 0.0023	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0065	< 0.0081	0.0048 J	< 0.0042	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS				< 0.0050	< 0.0050	< 0.0050	< 0.0050			
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS				< 0.000081	< 0.000081	< 0.000080	< 0.000081			

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Aroclor 1221	mg/L	0.0017	0.053				< 0.000081	< 0.000081	< 0.000080	< 0.000081			
Aroclor 1232	mg/L	0.0017	0.055				< 0.00016	< 0.00016	< 0.00016	< 0.00016			
Aroclor 1242	mg/L	0.0017	NS				< 0.000081	< 0.000081	< 0.000080	< 0.000081			
Aroclor 1248	mg/L	0.0017	NS				< 0.000081	< 0.000081	< 0.000080	< 0.000081			
Aroclor 1254	mg/L	0.0017	NS				< 0.000081	< 0.000081	< 0.000080	< 0.000081			
Aroclor 1260	mg/L	0.0017	NS				< 0.00012	< 0.00012	< 0.00012	< 0.00012			
Total PCBs	mg/L	0.0005	NS				< 0.000081	< 0.000081	< 0.000080	< 0.000081			
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.002	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	0.0003 J	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

Table 6
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East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-LD 19-Apr-18 N	MW-MD 13-Jan-11 N	MW-MD 19-Aug-13 N	MW-MD 31-May-16 N	MW-MD 18-Oct-16 N	MW-MD 10-Jan-17 N	MW-MD 28-Mar-17 N	MW-MD 22-Aug-17 N	MW-MD 31-Oct-17 N	MW-MD 09-Jan-18 N
Carbazole	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	0.0004 J	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.001	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	0.002 J	< 0.001	0.0006 J	0.0008 J	0.0008 J	0.0007 J	0.0007 J	0.0006 J	0.0007 J
1,1-Dichloroethene	mg/L	**0.007**	3.8	**0.01**	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005
n-Butyl acetate	mg/L	NS	NS	< 0.002			< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004			< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	0.0006 J	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	0.0007 J	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	0.0007 J	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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East 10th Street Site
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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-MD 19-Apr-18 N	MW-ND 03-Jun-16 N	MW-ND 25-Oct-16 N	MW-ND 18-Jan-17 N	MW-ND 05-Apr-17 N	MW-ND 21-Aug-17 N	MW-ND 01-Nov-17 N	MW-ND 16-Jan-18 N	MW-ND 24-Apr-18 N	MW-NS 03-Jun-16 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 Z	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS									483	
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS									47.5	
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS									1.9	
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0894	< 0.0929	< 0.0868	< 0.0868	< 0.0868	0.150 J	< 0.0894	< 0.0894	< 0.0894	0.259
Antimony	mg/L	**0.006**	NS	< 0.00045	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0062
Arsenic	mg/L	**0.01**	NS	< 0.0096	< 0.0078	< 0.0097	< 0.0097	< 0.0097	< 0.0096	< 0.0096	< 0.0096	< 0.0096	**0.0108 J**
Barium	mg/L	2	NS	0.0335	0.0289	0.0270	0.0266	0.0291	0.0295	0.0266	0.0253	0.0287	0.0396
Beryllium	mg/L	**0.004**	NS	< 0.0020	0.0017 J	0.0017 J	0.0022 J	0.0016 J	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0011
Cadmium	mg/L	**0.005**	NS	< 0.0018	< 0.00064	< 0.00049	0.00068 J	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00064
Calcium	mg/L	NS	NS	108	117	116	116	113	113	104	105	112	33.2
Chromium	mg/L	**0.1**	NS	< 0.0033	< 0.0020	< 0.0018	0.0065 J	< 0.0018	< 0.0033	< 0.0033	< 0.0033	< 0.0033	0.0031 J
Cobalt	mg/L	**0.035**	NS	< 0.0017	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.00090
Copper	mg/L	1	NS	< 0.0040	0.0049 J	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0034 J
Iron	mg/L	NS	NS	20.0	85.1	82.4	86.2	85.0	85.3	74.6	75.7	82.9	25.0
Lead	mg/L	**0.005**	NS	< 0.00011	< 0.0051	< 0.0310	< 0.0062	< 0.0062	< 0.0060	0.00013 J	< 0.00011	< 0.00011	< 0.0051
Magnesium	mg/L	NS	NS	29.0	26.8	25.5	27.0	26.8	26.1	23.8	23.9	25.9	13.5
Manganese	mg/L	**0.3**	NS	**0.454**	**1.27**	**1.21**	**1.32**	**1.27**	**1.25**	**1.16**	**1.15**	**1.24**	**0.495**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	0.0065 J	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0025
Potassium	mg/L	NS	NS	5.98	6.81	6.14	6.97	6.64	6.56	6.35	6.53	6.63	2.73
Selenium	mg/L	**0.05**	NS	< 0.0093	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0097
Silver	mg/L	0.1	NS	< 0.0024	< 0.0018	0.0059	< 0.0019	< 0.0019	0.0025 J	< 0.0024	< 0.0024	< 0.0024	< 0.0018
Sodium	mg/L	NS	NS	45.9	122	113	121	124	122	116	113	124	199
Thallium	mg/L	**0.002**	NS	< 0.00012	**0.0212 J**	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0084
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0023	< 0.0016	< 0.0016	< 0.0016	0.0026 J	< 0.0016	0.0021 J	< 0.0016	0.0065
Zinc	mg/L	**2**	NS	< 0.0065	0.0042 J	< 0.0054	0.0062 J	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	< 0.0042
Metals													
Cyanide	mg/L	0.2	NS		< 0.0050	< 0.0050	< 0.0050	< 0.0050					< 0.0050
Metals, Total													
Iron	mg/L	NS	NS									88.4	
Manganese	mg/L	**0.3**	NS									**1.28**	
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS		< 0.000081	< 0.000083	< 0.000081	< 0.000081					< 0.000082

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Aroclor 1221	mg/L	0.0017	0.053		< 0.000081	< 0.000083	< 0.000081	< 0.000081					< 0.000082
Aroclor 1232	mg/L	0.0017	0.055		< 0.00016	< 0.00017	< 0.00016	< 0.00016					< 0.00016
Aroclor 1242	mg/L	0.0017	NS		< 0.000081	< 0.000083	< 0.000081	< 0.000081					< 0.000082
Aroclor 1248	mg/L	0.0017	NS		< 0.000081	< 0.000083	< 0.000081	< 0.000081					< 0.000082
Aroclor 1254	mg/L	0.0017	NS		< 0.000081	< 0.000083	< 0.000081	< 0.000081					< 0.000082
Aroclor 1260	mg/L	0.0017	NS		< 0.00012	< 0.00012	< 0.00012	< 0.00012					< 0.00012
Total PCBs	mg/L	0.0005	NS		< 0.000081	< 0.000083	< 0.000081	< 0.000081					< 0.000082
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.00040	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0003 J	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	0.00011 J	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0004 J	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.0006 J	0.0005 J	0.0008 J	0.0008 J	0.0006 J	< 0.0005	0.0006 J	0.0007 J	< 0.0005	0.0006 J
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-MD 19-Apr-18 N	MW-ND 03-Jun-16 N	MW-ND 25-Oct-16 N	MW-ND 18-Jan-17 N	MW-ND 05-Apr-17 N	MW-ND 21-Aug-17 N	MW-ND 01-Nov-17 N	MW-ND 16-Jan-18 N	MW-ND 24-Apr-18 N	MW-NS 03-Jun-16 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	0.005	0.005	0.004	0.004	0.004	0.005	0.003	0.004	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0005 J
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0006 J	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-MD 19-Apr-18 N	MW-ND 03-Jun-16 N	MW-ND 25-Oct-16 N	MW-ND 18-Jan-17 N	MW-ND 05-Apr-17 N	MW-ND 21-Aug-17 N	MW-ND 01-Nov-17 N	MW-ND 16-Jan-18 N	MW-ND 24-Apr-18 N	MW-NS 03-Jun-16 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 Z	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	0.846	0.318	0.459	0.247	0.753	0.554	0.220	< 0.0929	< 0.0868	< 0.0868
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0077	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0062	< 0.0077	< 0.0077
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0097	< 0.0097	**0.0105 J**	< 0.0096	< 0.0096	**0.0125 J**	< 0.0078	< 0.0097	< 0.0097
Barium	mg/L	2	NS	0.0945	0.0828	0.0317	0.0951	0.116	0.0850	0.0328	0.0547	0.0371	0.0343
Beryllium	mg/L	**0.004**	NS	< 0.00067	0.00067 J	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0011	< 0.00067	< 0.00067
Cadmium	mg/L	**0.005**	NS	< 0.00049	< 0.00049	< 0.00049	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00064	< 0.00049	< 0.00049
Calcium	mg/L	NS	NS	48.2	48.3	26.0	55.8	55.7	50.2	26.8	550	510	517
Chromium	mg/L	**0.1**	NS	0.0062 J	0.0086 J	0.0025 J	< 0.0033	0.0045 J	0.0037 J	< 0.0033	0.0022 J	< 0.0018	< 0.0018
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0019	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	0.00094 J	< 0.0019	< 0.0019
Copper	mg/L	1	NS	< 0.0041	< 0.0041	< 0.0041	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0032	0.0099 J	< 0.0041
Iron	mg/L	NS	NS	118	65.9	7.46	82.7	101	67.4	20.2	5.10	26.2	16.8
Lead	mg/L	**0.005**	NS	< 0.0062	< 0.0062	< 0.0062	< 0.0060	0.00028 J	0.00014 J	< 0.00011	**0.0088 J**	< 0.0310	< 0.0062
Magnesium	mg/L	NS	NS	25.5	21.1	9.00	24.3	26.5	21.1	10.3	113	103	105
Manganese	mg/L	**0.3**	NS	**1.37**	**0.983**	0.230	**1.22**	**1.38**	**0.985**	**0.405**	**2.07**	**1.85**	**1.85**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	0.000074 J	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0028	< 0.0028	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0042 J	< 0.0028	0.0036 J
Potassium	mg/L	NS	NS	2.40	3.80	3.07	3.65	3.61	3.97	2.85	41.2	27.0	26.8
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0097	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0097	< 0.0097	< 0.0097
Silver	mg/L	0.1	NS	0.0077	< 0.0019	< 0.0019	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0019	< 0.0019	< 0.0019
Sodium	mg/L	NS	NS	210	219	209	222	234	223	216	274	232	238
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0094	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0084	< 0.0094	< 0.0094
Vanadium	mg/L	**0.0082**	NS	**0.0163**	0.0060	0.0071	**0.0083**	**0.0112**	**0.0091**	0.0051	< 0.0023	< 0.0016	< 0.0016
Zinc	mg/L	**2**	NS	< 0.0054	< 0.0054	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	0.0112 J	< 0.0054	0.0062 J
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050	< 0.0050	< 0.0050					< 0.0050	< 0.0050	< 0.0050
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000083	< 0.000080	< 0.000081					< 0.000081	< 0.000082	< 0.000080

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Aroclor 1221	mg/L	0.0017	0.053	< 0.000083	< 0.000080	< 0.000081					< 0.000081	< 0.000082	< 0.000080
Aroclor 1232	mg/L	0.0017	0.055	< 0.00017	< 0.00016	< 0.00016					< 0.00016	< 0.00016	< 0.00016
Aroclor 1242	mg/L	0.0017	NS	< 0.000083	< 0.000080	< 0.000081					< 0.000081	< 0.000082	< 0.000080
Aroclor 1248	mg/L	0.0017	NS	< 0.000083	< 0.000080	< 0.000081					< 0.000081	< 0.000082	< 0.000080
Aroclor 1254	mg/L	0.0017	NS	< 0.000083	< 0.000080	< 0.000081					< 0.000081	< 0.000082	< 0.000080
Aroclor 1260	mg/L	0.0017	NS	< 0.00012	< 0.00012	< 0.00012					< 0.00012	< 0.00012	< 0.00012
Total PCBs	mg/L	0.0005	NS	< 0.000083	< 0.000080	< 0.000081					< 0.000081	< 0.000082	< 0.000080
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.00040	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.00040	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001 J	< 0.0001	< 0.00010	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.0020	< 0.002	< 0.002	< 0.002	0.002 J	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Caprolactam	mg/L	NS	NS										

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Carbazole	mg/L	0.17	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0051	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0051	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002 J	< 0.0001	< 0.00010	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
Phenol	mg/L	2	84,000	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00051	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.00010	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	0.002	0.001 J	< 0.0005	< 0.003	< 0.005	< 0.005	0.0005 J	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	0.002	0.0009 J	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.015	< 0.03	< 0.03	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.015	< 0.03	< 0.03	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.015	< 0.03	< 0.03	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.03	< 0.06	< 0.06	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	0.0006 J	0.0006 J	0.0006 J

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-NS 25-Oct-16 N	MW-NS 18-Jan-17 N	MW-NS 05-Apr-17 N	MW-NS 21-Aug-17 N	MW-NS 01-Nov-17 N	MW-NS 16-Jan-18 N	MW-NS 24-Apr-18 N	MW-PD 07-Jun-16 N	MW-PD 26-Oct-16 N	MW-PD 17-Jan-17 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001	< 0.005	< 0.01	< 0.01	< 0.001	4.2	0.002 J	0.023
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	0.0006 J	0.001	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.25	< 0.5	< 0.5	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.005	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.002	< 0.01	< 0.005	< 0.005	< 0.0005	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.01	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.5	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.005	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.02	< 0.04	< 0.04	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	0.0006 J	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.003	< 0.005	< 0.005	0.0005 J	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-NS 25-Oct-16 N	MW-NS 18-Jan-17 N	MW-NS 05-Apr-17 N	MW-NS 21-Aug-17 N	MW-NS 01-Nov-17 N	MW-NS 16-Jan-18 N	MW-NS 24-Apr-18 N	MW-PD 07-Jun-16 N	MW-PD 26-Oct-16 N	MW-PD 17-Jan-17 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-PD 31-Mar-17 N	MW-PD 30-Aug-17 N	MW-PD 27-Oct-17 N	MW-PD 18-Jan-18 N	MW-PD 11-Apr-18 N	MW-PS 31-May-16 N	MW-PS 24-Oct-16 N	MW-PS 17-Jan-17 N	MW-PS 31-Mar-17 N	MW-PS 30-Aug-17 N
Ethylene glycol by SW8015													
Ethylene glycol	mg/L	14	1,000,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
General Parameters													
Sulfate	mg/L	NS	NS										
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS										
General Parameters, Total													
Organic Carbon, Total	mg/L	NS	NS										
Metals, Dissolved													
Aluminum	mg/L	NS	NS	< 0.0868	< 0.0894	< 0.0894	< 0.0894	< 0.0894 K2	< 0.0929	0.286	< 0.0868	< 0.0868	< 0.0894
Antimony	mg/L	**0.006**	NS	< 0.0077	< 0.0087	< 0.00045	< 0.00045	< 0.00045	< 0.0062	< 0.0077	< 0.0077	< 0.0077	< 0.0087
Arsenic	mg/L	**0.01**	NS	< 0.0097	< 0.0096	< 0.0096	< 0.0096	< 0.0096	**0.0199 J**	**0.0449**	**0.0275**	**0.0219**	**0.0260**
Barium	mg/L	2	NS	0.0325	0.0326	0.0328	0.0318	0.0281	0.0321	0.0140	0.0347	0.0289	0.0241
Beryllium	mg/L	**0.004**	NS	< 0.00067	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0011	< 0.00067	< 0.00067	< 0.00067	< 0.0020
Cadmium	mg/L	**0.005**	NS	0.00078 J	< 0.0018	< 0.0018	< 0.0018	< 0.0018	< 0.00064	< 0.00049	< 0.00049	< 0.00049	< 0.0018
Calcium	mg/L	NS	NS	455	502	460	498	505	68.6	42.9	59.8	56.7	59.6
Chromium	mg/L	**0.1**	NS	< 0.0018	< 0.0033	< 0.0033	0.0039 J	< 0.0033	< 0.0020	< 0.0018	< 0.0018	< 0.0018	0.0046 J
Cobalt	mg/L	**0.035**	NS	< 0.0019	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.00090	< 0.0019	< 0.0019	< 0.0019	< 0.0017
Copper	mg/L	1	NS	< 0.0041	< 0.0040	< 0.0040	0.0062 J	0.0094 J	< 0.0032	0.0047 J	< 0.0041	< 0.0041	< 0.0040
Iron	mg/L	NS	NS	17.3	38.3	44.2	43.7	30.5	9.33	2.47	6.36	6.33	6.55
Lead	mg/L	**0.005**	NS	< 0.0062	**0.0120 J**	< 0.00011	0.00011 J	< 0.00011	< 0.0051	< 0.0062	< 0.0062	< 0.0062	< 0.0060
Magnesium	mg/L	NS	NS	98.6	102	94.5	97.6	102	15.3	9.78	12.5	13.1	12.3
Manganese	mg/L	**0.3**	NS	**1.77**	**1.71**	**1.74**	**1.74**	**1.80**	**1.39**	**0.532**	**1.35**	**1.31**	**1.32**
Mercury	mg/L	0.002	NS	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050	< 0.000050
Nickel	mg/L	**0.1**	NS	< 0.0028	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0025	< 0.0028	< 0.0028	< 0.0028	< 0.0040
Potassium	mg/L	NS	NS	24.1	20.4	18.0	19.2	21.6	4.85	4.11	4.64	4.54	5.12
Selenium	mg/L	**0.05**	NS	< 0.0097	< 0.0093	< 0.0093	< 0.0093	< 0.0093	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0093
Silver	mg/L	0.1	NS	< 0.0019	< 0.0024	< 0.0024	< 0.0024	0.0040 J	< 0.0018	< 0.0019	< 0.0019	< 0.0019	< 0.0024
Sodium	mg/L	NS	NS	226	229	210	234	243	67.7	184	97.4	96.0	126
Thallium	mg/L	**0.002**	NS	< 0.0094	< 0.0137	< 0.00012	< 0.00012	< 0.00012	< 0.0084	< 0.0094	< 0.0094	< 0.0094	< 0.0137
Vanadium	mg/L	**0.0082**	NS	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0023	0.0073	0.0028 J	0.0017 J	0.0066
Zinc	mg/L	**2**	NS	< 0.0054	< 0.0065	< 0.0065	< 0.0065	< 0.0065	< 0.0042	< 0.0054	< 0.0054	< 0.0054	< 0.0065
Metals													
Cyanide	mg/L	0.2	NS	< 0.0050					< 0.0050	< 0.0050	< 0.0050	< 0.0050	
Metals, Total													
Iron	mg/L	NS	NS										
Manganese	mg/L	**0.3**	NS										
PCBs by SW8082													
Aroclor 1016	mg/L	0.0017	NS	< 0.000080					< 0.000081	< 0.000081	< 0.000080	< 0.000080	

Table 6
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East 10th Street Site
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Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-PD 31-Mar-17 N	MW-PD 30-Aug-17 N	MW-PD 27-Oct-17 N	MW-PD 18-Jan-18 N	MW-PD 11-Apr-18 N	MW-PS 31-May-16 N	MW-PS 24-Oct-16 N	MW-PS 17-Jan-17 N	MW-PS 31-Mar-17 N	MW-PS 30-Aug-17 N
Aroclor 1221	mg/L	0.0017	0.053	< 0.000080					< 0.000081	< 0.000081	< 0.000080	< 0.000080	
Aroclor 1232	mg/L	0.0017	0.055	< 0.00016					< 0.00016	< 0.00016	< 0.00016	< 0.00016	
Aroclor 1242	mg/L	0.0017	NS	< 0.000080					< 0.000081	< 0.000081	< 0.000080	< 0.000080	
Aroclor 1248	mg/L	0.0017	NS	< 0.000080					< 0.000081	< 0.000081	< 0.000080	< 0.000080	
Aroclor 1254	mg/L	0.0017	NS	< 0.000080					< 0.000081	< 0.000081	< 0.000080	< 0.000080	
Aroclor 1260	mg/L	0.0017	NS	< 0.00012					< 0.00012	< 0.00012	< 0.00012	< 0.00012	
Total PCBs	mg/L	0.0005	NS	< 0.000080					< 0.000081	< 0.000081	< 0.000080	< 0.000080	
SVOCs by SW8270C													
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	mg/L	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	mg/L	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	mg/L	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	mg/L	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	mg/L	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	mg/L	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	mg/L	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	mg/L	**0.002**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	mg/L	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.00040	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	mg/L	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	mg/L	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	mg/L	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	mg/L	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002
3-Nitroaniline	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	mg/L	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	mg/L	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	mg/L	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	mg/L	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Anthracene	mg/L	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	mg/L	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	mg/L	**0.0002**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	mg/L	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	mg/L	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002
Caprolactam	mg/L	NS	NS										

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Marcus Hook, Pennsylvania

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Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.00050	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00010	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B													
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	0.0006 J	0.0006 J	0.0007 J	0.0008 J	0.0007 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

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Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	0.013	< 0.001	< 0.001	< 0.001	0.014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96										
Methylene chloride	mg/L	0.005	95	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

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Ethylene glycol by SW8015						
Ethylene glycol	mg/L	14	1,000,000	*< 5.0*	*< 5.0*	*< 5.0*
General Parameters						
Sulfate	mg/L	NS	NS			
Alkalinity, Total as CaCO3	mg CaCO3/L	NS	NS			
General Parameters, Total						
Organic Carbon, Total	mg/L	NS	NS			
Metals, Dissolved						
Aluminum	mg/L	NS	NS	*< 0.0894*	*< 0.0894*	*< 0.0894 K2*
Antimony	mg/L	**0.006**	NS	*< 0.00045*	*< 0.00045*	*< 0.00045*
Arsenic	mg/L	**0.01**	NS	**0.0377**	**0.0271**	**0.0127 J**
Barium	mg/L	2	NS	0.0391	0.0283	0.0309
Beryllium	mg/L	**0.004**	NS	*< 0.0020*	*< 0.0020*	*< 0.0020*
Cadmium	mg/L	**0.005**	NS	*< 0.0018*	*< 0.0018*	*< 0.0018*
Calcium	mg/L	NS	NS	57.5	56.1	63.8
Chromium	mg/L	**0.1**	NS	*< 0.0033*	*< 0.0033*	0.0039 J
Cobalt	mg/L	**0.035**	NS	*< 0.0017*	*< 0.0017*	*< 0.0017*
Copper	mg/L	1	NS	*< 0.0040*	*< 0.0040*	*< 0.0040*
Iron	mg/L	NS	NS	15.4	7.42	6.30
Lead	mg/L	**0.005**	NS	*< 0.00011*	*< 0.00011*	*< 0.00011*
Magnesium	mg/L	NS	NS	11.8	12.2	13.4
Manganese	mg/L	**0.3**	NS	**1.59**	**1.23**	**2.08**
Mercury	mg/L	0.002	NS	*< 0.000050*	*< 0.000050*	*< 0.000050*
Nickel	mg/L	**0.1**	NS	*< 0.0040*	*< 0.0040*	*< 0.0040*
Potassium	mg/L	NS	NS	4.49	5.43	5.64
Selenium	mg/L	**0.05**	NS	*< 0.0093*	*< 0.0093*	*< 0.0093*
Silver	mg/L	0.1	NS	0.0025 J	*< 0.0024*	0.0095
Sodium	mg/L	NS	NS	75.7	107	127
Thallium	mg/L	**0.002**	NS	*< 0.00012*	*< 0.00012*	*< 0.00012*
Vanadium	mg/L	**0.0082**	NS	*< 0.0016*	0.0028 J	0.0045 J
Zinc	mg/L	**2**	NS	*< 0.0065*	*< 0.0065*	*< 0.0065*
Metals						
Cyanide	mg/L	0.2	NS			
Metals, Total						
Iron	mg/L	NS	NS			
Manganese	mg/L	**0.3**	NS			
PCBs by SW8082						
Aroclor 1016	mg/L	0.0017	NS			

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-PS 27-Oct-17 N	MW-PS 18-Jan-18 N	MW-PS 11-Apr-18 N
Aroclor 1221	mg/L	0.0017	0.053			
Aroclor 1232	mg/L	0.0017	0.055			
Aroclor 1242	mg/L	0.0017	NS			
Aroclor 1248	mg/L	0.0017	NS			
Aroclor 1254	mg/L	0.0017	NS			
Aroclor 1260	mg/L	0.0017	NS			
Total PCBs	mg/L	0.0005	NS			
SVOCs by SW8270C						
1,2,4-Trichlorobenzene	mg/L	**0.07**	1	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,2-Dichlorobenzene	mg/L	0.6	69	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,3-Dichlorobenzene	mg/L	0.6	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,4-Dichlorobenzene	mg/L	0.075	0.68	*< 0.0005*	*< 0.0005*	*< 0.0005*
2,2-Oxybis(1-chloropropane)	mg/L	0.3	25	*< 0.0005*	*< 0.0005*	*< 0.0005*
2,4,5-Trichlorophenol	mg/L	12	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
2,4,6-Trichlorophenol	mg/L	0.12	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
2,4-Dichlorophenol	mg/L	0.02	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
2,4-Dimethylphenol	mg/L	2.3	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
2,4-Dinitrophenol	mg/L	0.23	NS	*< 0.01*	*< 0.01*	*< 0.01*
2,4-Dinitrotoluene	mg/L	0.011	NS	*< 0.001*	*< 0.001*	*< 0.001*
2,6-Dinitrotoluene	mg/L	**0.002**	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
2-Chloronaphthalene	mg/L	9.3	NS	*< 0.0004*	*< 0.0004*	*< 0.0004*
2-Chlorophenol	mg/L	0.04	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
2-Methylnaphthalene	mg/L	0.47	4.8	*< 0.0001*	*< 0.0001*	*< 0.0001*
2-Nitroaniline	mg/L	1.2	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
2-Nitrophenol	mg/L	0.93	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
3,3'-Dichlorobenzidine	mg/L	0.0076	NS	*< 0.002*	*< 0.002*	*< 0.002*
3-Nitroaniline	mg/L	NS	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
4-Bromophenyl phenyl ether	mg/L	NS	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
4-Chloro-3-methylphenol	mg/L	12	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
4-Chlorophenyl phenyl ether	mg/L	NS	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
4-Nitrophenol	mg/L	0.06	NS	*< 0.01*	*< 0.01*	*< 0.01*
Acenaphthene	mg/L	3.8	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*
Acenaphthylene	mg/L	7	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*
Anthracene	mg/L	0.066	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*
Benzo(a)anthracene	mg/L	0.0049	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*
Benzo(a)pyrene	mg/L	**0.0002**	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*
Benzo(b)fluoranthene	mg/L	0.0012	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*
Benzo(g,h,i)perylene	mg/L	**0.00026**	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*
Benzo(k)fluoranthene	mg/L	**0.00055**	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*
Benzyl butyl phthalate	mg/L	1.8	NS	*< 0.002*	*< 0.002*	*< 0.002*
Bis(2-chloroethoxy)methane	mg/L	0.35	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*
Bis(2-ethylhexyl)phthalate	mg/L	**0.006**	NS	*< 0.002*	*< 0.002*	*< 0.002*
Caprolactam	mg/L	NS	NS			

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-PS 27-Oct-17 N	MW-PS 18-Jan-18 N	MW-PS 11-Apr-18 N
Carbazole	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005
Chrysene	mg/L	0.0019	NS	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0006	NS	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	mg/L	0.12	NS	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	mg/L	12	NS	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	mg/L	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	mg/L	93	NS	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	mg/L	0.0093	NS	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	mg/L	1.2	NS	< 0.002	< 0.002	< 0.002
Fluoranthene	mg/L	0.26	NS	< 0.0001	< 0.0001	< 0.0001
Fluorene	mg/L	1.9	NS	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	mg/L	0.001	NS	< 0.0001	< 0.0001	< 0.0001
Hexachlorobutadiene	mg/L	0.044	NS	< 0.0005	< 0.0005	< 0.0005
Hexachlorocyclopentadiene	mg/L	0.05	NS	< 0.005	< 0.005	< 0.005
Hexachloroethane	mg/L	0.001	0.48	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	mg/L	0.0028	NS	< 0.0001	< 0.0001	< 0.0001
Isophorone	mg/L	0.1	NS	< 0.0005	< 0.0005	< 0.0005
Naphthalene	mg/L	0.1	1.3	< 0.0001	< 0.0001	< 0.0001
Nitrobenzene	mg/L	0.23	21	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodi-n-propylamine	mg/L	0.00049	NS	< 0.0005	< 0.0005	< 0.0005
n-Nitrosodiphenylamine	mg/L	0.69	NS	< 0.0005	< 0.0005	< 0.0005
o-Cresol	mg/L	5.8	NS	< 0.0005	< 0.0005	< 0.0005
p-Chloroaniline	mg/L	0.017	NS	< 0.002	< 0.002	< 0.002
p-Cresol	mg/L	0.58	NS	< 0.0005	< 0.0005	< 0.0005
Pentachlorophenol	mg/L	**0.001**	NS	< 0.001	< 0.001	< 0.001
Phenanthrene	mg/L	1.1	NS	< 0.0001	< 0.0001	< 0.0001
Phenol	mg/L	2	84,000	< 0.0005	0.0006 J	0.0009 J
p-Nitroaniline	mg/L	0.17	NS	< 0.0005	< 0.0005	< 0.0005
Pyrene	mg/L	0.13	NS	< 0.0001	< 0.0001	< 0.0001
VOCs by SW8260B						
1,1,1-Trichloroethane	mg/L	0.2	160	< 0.0005	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	**0.0043**	0.82	< 0.0005	< 0.0005	< 0.0005
1,1,2-Trichloroethane	mg/L	**0.005**	0.14	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethane	mg/L	**0.16**	1.6	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	mg/L	**0.007**	3.8	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	mg/L	0.005	0.51	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloropropane	mg/L	0.005	0.56	< 0.0005	< 0.0005	< 0.0005
2-Butanone	mg/L	4	49,000	< 0.003	< 0.003	< 0.003
2-Hexanone	mg/L	0.26	200	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/L	9.3	13,000	< 0.003	< 0.003	< 0.003
Acetone	mg/L	110	470,000	< 0.006	< 0.006	< 0.006
Benzene	mg/L	0.005	0.35	< 0.0005	< 0.0005	< 0.0005

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-PS 27-Oct-17 N	MW-PS 18-Jan-18 N	MW-PS 11-Apr-18 N
Bromodichloromethane	mg/L	0.08	0.2	< 0.0005	< 0.0005	< 0.0005
Bromoform	mg/L	0.08	30	< 0.0005	< 0.0005	< 0.0005
Carbon disulfide	mg/L	**6.2**	**25**	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/L	**0.005**	0.091	< 0.0005	< 0.0005	< 0.0005
Chlorobenzene	mg/L	0.1	9.6	< 0.0005	< 0.0005	< 0.0005
Chloroethane	mg/L	1.2	440	< 0.0005	< 0.0005	< 0.0005
Chloroform	mg/L	0.08	0.18	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	mg/L	**0.07**	NS	< 0.0005	< 0.0005	< 0.0005
cis-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005
Dibromochloromethane	mg/L	0.08	0.67	< 0.0005	< 0.0005	< 0.0005
Ethanol	mg/L	NS	NS	< 0.05	< 0.05	< 0.05
Ethyl acetate	mg/L	0.62	290	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/L	0.7	0.86	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	mg/L	0.01	0.33	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	mg/L	0.03	0.81	< 0.0005	< 0.0005	< 0.0005
Methyl tert-butyl ether	mg/L	0.02	96			
Methylene chloride	mg/L	0.005	95	< 0.0005	< 0.0005	< 0.0005
n-Butyl acetate	mg/L	NS	NS	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/L	12	NS	< 0.1	< 0.1	< 0.1
Styrene	mg/L	0.1	220	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/L	**0.005**	1.3	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	mg/L	0.13	0.13	< 0.004	< 0.004	< 0.004
Toluene	mg/L	1	430	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	mg/L	0.1	7.6	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	mg/L	NS	NS	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	mg/L	**0.005**	**0.11**	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	mg/L	**0.002**	0.052	< 0.0005	< 0.0005	< 0.0005
Xylenes	mg/L	10	12	< 0.0005	< 0.0005	0.0007 J

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/L = milligrams per liter
mg CaCO3/L = milligrams of CaCO3 per liter

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

Table 6
Groundwater Sample Summary - 2004-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 GW NRES	PADEP_2016 GW SHS NR	MW-PS 27-Oct-17 N	MW-PS 18-Jan-18 N	MW-PS 11-Apr-18 N

J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Qualifiers - Inorganic:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW NRES = Pennsylvania Act 2 Medium Specific Concentrations (MSCs), Non-Residential Groundwater, TDS < 2500, revised August 2016.
PADEP_2016 GW SHS NR = Pennsylvania Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

Table 7
Soil Sample Summary - 2010 Data
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	ESB-1 12-Nov-10 3 - 3.5 ft	ESB-10 11-Nov-10 10.5 - 11 ft	ESB-11 09-Nov-10 11.5 - 12 ft	ESB-12 10-Nov-10 7.5 - 8 ft	ESB-13 09-Nov-10 1 - 1.5 ft	ESB-14 09-Nov-10 1 - 1.5 ft	ESB-15 09-Nov-10 5.5 - 6 ft
VOC, Method SW8260B, mg/kg												
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001	0.003 J	0.006	< 0.001	< 0.001	0.019
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.005	< 0.004	< 0.004	< 0.004	< 0.005	< 0.005	< 0.004
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.004	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.004	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.014 J	< 0.007	< 0.007	< 0.007	0.058	0.042	< 0.007
Benzene	mg/kg	290	330	0.13	0.5	< 0.0006	< 0.0005	< 0.0005	< 0.0005	0.001 J	0.001 J	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620	0.004 J	< 0.001	< 0.001	< 0.001	0.002 J	0.003 J	0.003 J
Carbon tetrachloride	mg/kg	370	430	**0.26**	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	**0.43**	**0.5**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	< 0.001	< 0.001	0.003 J	0.004 J	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/kg	160	180	**0.17**	**0.5**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Table 7
Soil Sample Summary - 2010 Data
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	ESB-1 12-Nov-10 3 - 3.5 ft	ESB-10 11-Nov-10 10.5 - 11 ft	ESB-11 09-Nov-10 11.5 - 12 ft	ESB-12 10-Nov-10 7.5 - 8 ft	ESB-13 09-Nov-10 1 - 1.5 ft	ESB-14 09-Nov-10 1 - 1.5 ft	ESB-15 09-Nov-10 5.5 - 6 ft

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = Pennsylvania Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 7
Soil Sample Summary - 2010 Data
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	ESB-18 09-Nov-10 3 - 3.5 ft	ESB-19 09-Nov-10 10.5 - 11 ft	ESB-2 12-Nov-10 11.5 - 12 ft	ESB-20 10-Nov-10 14.5 - 15 ft	ESB-21 09-Nov-10 11.5 - 12 ft	ESB-22 09-Nov-10 3.5 - 4 ft	ESB-23 10-Nov-10 17.5 - 18 ft
VOC, Method SW8260B, mg/kg												
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	0.015	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
2-Butanone	mg/kg	10,000	10,000	1,100	400	*< 0.005*	*< 0.004*	*< 0.004*	*< 0.004*	*< 0.004*	*< 0.004*	*< 0.006*
2-Hexanone	mg/kg	2,400	2,800	6.4	26	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.005*
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.005*
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.026	*< 0.006*	*< 0.007*	*< 0.008*	*< 0.007*	*< 0.008*	*< 0.011*
Benzene	mg/kg	290	330	0.13	0.5	*< 0.0006*	*< 0.0005*	*< 0.0005*	*< 0.0006*	*< 0.0005*	*< 0.0006*	*< 0.0008*
Bromodichloromethane	mg/kg	60	69	2.7	8	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Bromoform	mg/kg	2,000	2,300	3.5	8	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Carbon disulfide	mg/kg	10,000	10,000	530	620	*< 0.001*	*< 0.0009*	0.004 J	*< 0.001*	0.003 J	*< 0.001*	*< 0.002*
Carbon tetrachloride	mg/kg	370	430	**0.26**	0.5	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Chloroethane	mg/kg	10,000	10,000	26	120	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.003*
Chloroform	mg/kg	97	110	2	8	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Dibromochloromethane	mg/kg	82	95	2.5	8	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Ethylbenzene	mg/kg	890	1,000	46	70	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Methyl bromide	mg/kg	400	460	0.54	1	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.003*
Methyl chloride	mg/kg	1,200	1,400	0.38	3	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.003*
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.003*
Styrene	mg/kg	10,000	10,000	79	24	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Tetrachloroethene	mg/kg	3,200	3,600	**0.43**	**0.5**	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Toluene	mg/kg	10,000	10,000	44	100	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Trichloroethene	mg/kg	160	180	**0.17**	**0.5**	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Vinyl chloride	mg/kg	61	280	0.027	0.2	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*
Xylenes	mg/kg	8,000	9,100	990	1,000	*< 0.001*	*< 0.0009*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.002*

Table 7
Soil Sample Summary - 2010 Data
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	ESB-18 09-Nov-10 3 - 3.5 ft	ESB-19 09-Nov-10 10.5 - 11 ft	ESB-2 12-Nov-10 11.5 - 12 ft	ESB-20 10-Nov-10 14.5 - 15 ft	ESB-21 09-Nov-10 11.5 - 12 ft	ESB-22 09-Nov-10 3.5 - 4 ft	ESB-23 10-Nov-10 17.5 - 18 ft

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = Pennsylvania Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 7
Soil Sample Summary - 2010 Data
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	ESB-24 10-Nov-10 15.5 - 16 ft	ESB-25 11-Nov-10 15.5 - 16 ft	ESB-26 10-Nov-10 18 - 18.5 ft	ESB-27 11-Nov-10 1 - 1.5 ft	ESB-28 11-Nov-10 7 - 7.5 ft	ESB-29 11-Nov-10 1.5 - 2 ft	ESB-3 11-Nov-10 1 - 1.5 ft
VOC, Method SW8260B, mg/kg												
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.002	0.027	0.26	4.4	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	0.015	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.002	< 0.001	0.016	0.1	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	0.007	< 0.001	< 0.002	< 0.001	0.008	0.004 J	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	0.003 J	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.005	< 0.004	< 0.006	< 0.005	< 0.004	0.005 J	< 0.004
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.004	< 0.003	< 0.005	< 0.004	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.004	< 0.003	< 0.005	< 0.004	< 0.003	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.009	< 0.007	0.044	0.032	0.008 J	0.073	0.04
Benzene	mg/kg	290	330	0.13	0.5	< 0.0007	< 0.0005	< 0.0008	< 0.0006	< 0.0005	< 0.0006	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	< 0.001	0.002 J	0.002 J	< 0.001	0.006	0.001 J
Carbon tetrachloride	mg/kg	370	430	**0.26**	0.5	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	0.002 J	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	0.004 J	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	0.017	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	**0.43**	**0.5**	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	0.008
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	0.002 J	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	0.011	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/kg	160	180	**0.17**	**0.5**	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	0.004 J	0.004 J
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001

Table 7
Soil Sample Summary - 2010 Data
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	ESB-24 10-Nov-10 15.5 - 16 ft	ESB-25 11-Nov-10 15.5 - 16 ft	ESB-26 10-Nov-10 18 - 18.5 ft	ESB-27 11-Nov-10 1 - 1.5 ft	ESB-28 11-Nov-10 7 - 7.5 ft	ESB-29 11-Nov-10 1.5 - 2 ft	ESB-3 11-Nov-10 1 - 1.5 ft

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = Pennsylvania Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 7
Soil Sample Summary - 2010 Data
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Direct Contact 2-15 PADEP_2016 SO DC NRES SUBS 2-15FT	Vapor Intrusion PADEP_2016 SO SHS NR	Soil to Groundwater PADEP_2016 SO STGW NRES	ESB-30 11-Nov-10 1 - 1.5 ft	ESB-4 12-Nov-10 17 - 17.5 ft	ESB-5 12-Nov-10 15.5 - 16 ft	ESB-6 12-Nov-10 11 - 11.5 ft	ESB-7 12-Nov-10 8 - 8.5 ft	ESB-8 12-Nov-10 2 - 2.5 ft	ESB-9 12-Nov-10 2.5 - 3 ft
VOC, Method SW8260B, mg/kg												
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	0.38 J	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.005	< 0.39	< 0.17	< 0.005	< 0.004	< 0.004	< 0.005
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.29	< 0.13	< 0.004	< 0.003	< 0.003	< 0.004
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.29	< 0.13	< 0.004	< 0.003	< 0.003	< 0.004
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.045	< 0.68	< 0.3	3.8 E	< 0.007	0.018 J	0.096
Benzene	mg/kg	290	330	0.13	0.5	< 0.0006	< 0.049	< 0.021	< 0.0007	< 0.0005	< 0.0005	0.003 J
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	< 0.097	< 0.043	0.005 J	< 0.001	< 0.001	0.002 J
Carbon tetrachloride	mg/kg	370	430	**0.26**	0.5	< 0.001	**0.49**	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.19	< 0.086	< 0.003	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.097	< 0.043	0.002 J	< 0.001	< 0.001	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.19	< 0.086	< 0.003	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.19	< 0.086	< 0.003	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.19	< 0.086	< 0.003	< 0.002	< 0.002	< 0.002
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	**0.43**	**0.5**	< 0.001	**12**	0.074 J	< 0.001	< 0.001	< 0.001	0.003 J
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	0.003 J
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/kg	160	180	**0.17**	**0.5**	< 0.001	**1.2**	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.097	< 0.043	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.097	< 0.043	0.015	< 0.001	< 0.001	0.002 J

Table 7
Soil Sample Summary - 2010 Data
East 10th Street Site
Marcus Hook, Pennsylvania

						ESB-30	ESB-4	ESB-5	ESB-6	ESB-7	ESB-8	ESB-9
						11-Nov-10	12-Nov-10	12-Nov-10	12-Nov-10	12-Nov-10	12-Nov-10	12-Nov-10
		Direct Contact 0-2	Direct Contact 2-15	Vapor Intrusion	Soil to Groundwater	1 - 1.5 ft	17 - 17.5 ft	15.5 - 16 ft	11 - 11.5 ft	8 - 8.5 ft	2 - 2.5 ft	2.5 - 3 ft
Analyte	**Unit**	**PADEP_2016 SO DC NRES SS 0-2FT**	**PADEP_2016 SO DC NRES SUBS 2-15FT**	**PADEP_2016 SO SHS NR**	**PADEP_2016 SO STGW NRES**							

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = Pennsylvania Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L01-SB01 17-Dec-15 N 0 - 1 ft	ERM-L01-SB01 18-Dec-15 N 7 - 8 ft	ERM-L01-SB01 18-Dec-15 N 15 - 16 ft	ERM-L01-SB01 13-Jan-16 N 7 - 8 ft	ERM-L01-SB02 17-Dec-15 N 0 - 1 ft	ERM-L01-SB02 18-Dec-15 N 7 - 8 ft	ERM-L01-SB02 18-Dec-15 N 15 - 16 ft	ERM-L01-SB03 17-Dec-15 N 0 - 1 ft	ERM-L01-SB03 18-Dec-15 N 6 - 7 ft	ERM-L01-SB03 18-Dec-15 N 11 - 12 ft	ERM-L01-SB04 14-Oct-15 N 0 - 1 ft	ERM-L01-SB04 21-Oct-15 N 11 - 12 ft	ERM-L01-SB05 14-Oct-15 N 0 - 1 ft	ERM-L01-SB05 21-Oct-15 N 11 - 12 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS											0.25		0.25	
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected		None Detected	None Detected	None Detected	None Detected	None Detected	None Detected		None Detected		None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 5.9	< 5.9	< 7.4	< 6.2	< 6.3	< 5.8	< 6.0	< 6.1	< 6.0	< 6.7	< 5.9	< 6.2	< 6.1	< 6.0
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.21	< 0.21	< 0.27		< 0.22	< 0.20	< 0.21	< 0.22	< 0.22	< 0.23	< 1.0	< 0.21	< 0.22	< 0.21
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	58,000	11,700	15,200		24,300	10,900	9,010	23,600	18,700	12,100	18,400	26,500	17,100	37,400
Antimony	mg/kg	**1,300**	190,000	NS	**27**	10.3	< 0.514	< 0.558		5.34	< 0.435	< 0.469	5.28	5.14 J	< 0.695	< 0.481	0.917 J	< 0.488	0.577 J
Arsenic	mg/kg	**61**	190,000	NS	**29**	< 0.696	2.99	3.41		2.77	2.65	2.34 J	3.29	7.89	3.43	**29.5**	6.75	**30.3**	6.49
Barium	mg/kg	190,000	190,000	NS	8,200	260	34.4	53.6		147	34.2	44.1	143	67.4	41.3	146	89.7	106	256
Beryllium	mg/kg	6,400	190,000	NS	320	4.03	0.488 J	0.671 J		1.13	0.461 J	0.411 J	1.15	0.935	1.20	1.10	1.13	1.17	1.77
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.0578	< 0.0567	< 0.0715		0.174 J	< 0.0572	< 0.0578	0.221 J	< 0.0570	< 0.0649	< 0.0504	< 0.0513	0.868	0.150 J
Calcium	mg/kg	NS	NS	NS	NS	6,030	440	621		1,690	341	305	1,660	564	427	2,340	1,990	3,400	2,740
Chromium	mg/kg	190,000	190,000	NS	190,000	109	17.5	21.9		38.9	20.0	14.5	37.4	48.5	17.9	40.7	50.3	39.3	53.1
Cobalt	mg/kg	960	190,000	NS	160	23.3	5.48	5.17		9.11	4.30	4.16	10.3	4.68	5.81	9.12	4.06	7.84	9.95
Copper	mg/kg	120,000	190,000	NS	43,000	56.8	11.0	12.1		23.8	11.0	11.0	31.6	22.7	14.0	87.7	24.7	51.5	55.7
Iron	mg/kg	190,000	190,000	NS	NS	53,500	13,400	12,400		30,300	13,900	7,690	29,600	19,500	22,100	28,400	33,000	26,200	31,600
Lead	mg/kg	**1,000**	190,000	NS	**450**	17.0	5.45	7.52		30.3	5.57	5.95	54.7	9.24	7.35	189	12.9	126	28.2
Magnesium	mg/kg	NS	NS	NS	NS	17,200	1,990	2,270		4,400	2,040	2,270	4,600	3,140	2,470	4,200	3,790	3,100	7,400
Manganese	mg/kg	150,000	190,000	NS	**2,000**	918	122	104		428	165	82.1	509	127	122	311	73.6	265	494
Mercury	mg/kg	510	190,000	NS	**10**	< 0.0118	< 0.0113	0.0311 J		0.0716 J	< 0.0110	< 0.0115	0.0965 J	< 0.0115	< 0.0125	0.312	0.0410 J	0.849	0.0181 J
Nickel	mg/kg	64,000	190,000	NS	650	60.5	12.6	14.0		19.3	11.8	12.0	20.7	16.2	15.8	37.3	15.4	24.1	35.1
Potassium	mg/kg	NS	NS	NS	NS	13,000	1,010	1,180		2,050	905	1,180	1,740	1,740	1,310	3,240	2,680	1,700	6,650
Selenium	mg/kg	16,000	190,000	NS	26	5.77	< 0.960	< 1.21		4.45	< 0.970	< 0.978	3.76	< 0.965	1.86 J	5.85	5.75	4.87	2.41
Silver	mg/kg	16,000	190,000	NS	84	0.633	< 0.171	< 0.186		< 0.223	< 0.145	< 0.156	< 0.210	< 0.188	< 0.232	0.885	1.10	1.04	1.44
Sodium	mg/kg	NS	NS	NS	NS	371	148	191		188	63.7 J	58.1 J	149	337	79.2 J	160	2,080	111 J	352
Thallium	mg/kg	32	190,000	NS	**14**	3.66	< 0.867	< 1.09		1.71 J	< 0.876	< 0.884	1.44 J	< 0.872	< 0.994	0.957 J	< 0.895	< 0.893	1.05 J
Vanadium	mg/kg	**220**	190,000	NS	**820**	116	22.5	26.5		63.5	22.5	13.1	71.8	55.4	24.0	49.6	63.9	51.0	60.1
Zinc	mg/kg	190,000	190,000	NS	12,000	98.4	28.7	30.5		70.2	25.3	32.3	99.3	38.3	39.8	294	44.1	245	114
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0042	< 0.0042	< 0.0053		< 0.022	< 0.0042	< 0.0042	< 0.022	< 0.0043	< 0.0048	< 0.042	< 0.0044	< 0.044	< 0.0043
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0054	< 0.0054	< 0.0068		< 0.029	< 0.0053	< 0.0054	< 0.028	< 0.0055	< 0.0061	< 0.054	< 0.0057	< 0.056	< 0.0054
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.0093	< 0.0093	< 0.012		< 0.05	< 0.0092	< 0.0094	< 0.048	< 0.0096	< 0.011	< 0.094	< 0.0099	< 0.098	< 0.0095
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0039	< 0.0038	< 0.0049		< 0.02	< 0.0038	< 0.0039	< 0.02	< 0.0040	< 0.0044	< 0.039	< 0.0041	< 0.04	< 0.0039
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0039	< 0.0038	< 0.0049		< 0.02	< 0.0038	< 0.0039	< 0.02	< 0.0040	< 0.0044	< 0.039	< 0.0041	< 0.04	< 0.0039
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.0039	< 0.0038	< 0.0049		< 0.02	< 0.0038	< 0.0039	< 0.02	< 0.0040	< 0.0044	< 0.039	< 0.0041	< 0.04	< 0.0039
Aroclor 1260	mg/kg	**46**	190,000	NS	770	< 0.0057	< 0.0057	< 0.0072		0.069 J	< 0.0057	< 0.0058	0.067 J	< 0.0059	< 0.0065	0.96	< 0.0060	1.6	< 0.0058
Total PCBs	mg/kg	NS	NS	NS	NS	< 0.0039	< 0.0038	< 0.0049		0.069 J	< 0.0038	< 0.0039	0.067 J	< 0.0040	< 0.0044	0.96	< 0.0041	1.6	< 0.0039
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.35	< 0.35	< 0.44		< 0.37	< 0.35	< 0.35	< 1.8	< 0.36	< 0.4	< 1.8	< 0.37	< 1.8	< 0.35
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.078	< 0.078	< 0.098		< 0.083	< 0.077	< 0.079	< 0.4	< 0.079	< 0.088	< 0.39	< 0.082	< 0.4	< 0.079
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.008	< 0.008	< 0.01		< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.009	< 0.039	< 0.008	< 0.04	< 0.008
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L01-SB01 17-Dec-15 N 0 - 1 ft	ERM-L01-SB01 18-Dec-15 N 7 - 8 ft	ERM-L01-SB01 18-Dec-15 N 15 - 16 ft	ERM-L01-SB01 13-Jan-16 N 7 - 8 ft	ERM-L01-SB02 17-Dec-15 N 0 - 1 ft	ERM-L01-SB02 18-Dec-15 N 7 - 8 ft	ERM-L01-SB02 18-Dec-15 N 15 - 16 ft	ERM-L01-SB03 17-Dec-15 N 0 - 1 ft	ERM-L01-SB03 18-Dec-15 N 6 - 7 ft	ERM-L01-SB03 18-Dec-15 N 11 - 12 ft	ERM-L01-SB04 14-Oct-15 N 0 - 1 ft	ERM-L01-SB04 21-Oct-15 N 11 - 12 ft	ERM-L01-SB05 14-Oct-15 N 0 - 1 ft	ERM-L01-SB05 21-Oct-15 N 11 - 12 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	< 0.004	0.055	< 0.005		0.004 J	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	0.36	< 0.004	0.17	0.02 J
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.12	< 0.12	< 0.15		< 0.12	< 0.12	< 0.12	< 0.6	< 0.12	< 0.13	< 0.59	< 0.12	< 0.61	< 0.12
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.078	< 0.078	< 0.098		< 0.083	< 0.077	< 0.079	< 0.4	< 0.079	< 0.088	< 0.39	< 0.082	< 0.4	< 0.079
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.2	< 0.2	< 0.25		< 0.21	< 0.19	< 0.2	< 1	< 0.2	< 0.22	< 0.99	< 0.2	< 1	< 0.2
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.004	0.015 J	< 0.005		0.005 J	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	2.8	< 0.004	< 0.02	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.004	< 0.004	< 0.005		< 0.004	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	0.14	< 0.004	0.024 J	0.008 J
Anthracene	mg/kg	190,000	190,000	NS	350	< 0.004	0.004 J	< 0.005		0.012 J	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	6.9	< 0.004	0.057 J	0.01 J
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	< 0.004	< 0.004	< 0.005		0.034	< 0.004	< 0.004	0.072 J	< 0.004	< 0.004	28	< 0.004	0.2	0.017 J
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	< 0.004	< 0.004	< 0.005		0.043	< 0.004	< 0.004	0.088 J	< 0.004	< 0.004	**15**	< 0.004	0.17	0.015 J
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	< 0.004	< 0.004	< 0.005		0.067	< 0.004	< 0.004	0.13	< 0.004	< 0.004	23	< 0.004	0.29	0.034
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	< 0.004	< 0.004	< 0.005		0.034	< 0.004	< 0.004	0.085 J	< 0.004	< 0.004	6.7	< 0.004	0.14	0.02
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	< 0.004	< 0.004	< 0.005		0.022	< 0.004	< 0.004	0.063 J	< 0.004	< 0.004	9.1	< 0.004	0.11	0.011 J
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.078	< 0.078	< 0.098		< 0.083	< 0.077	< 0.079	< 0.4	< 0.079	< 0.088	< 0.39	< 0.082	< 0.4	< 0.079
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.078	< 0.078	< 0.098		< 0.083	< 0.077	< 0.079	< 0.4	< 0.079	< 0.088	< 0.39	< 0.082	< 0.4	< 0.079
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	3.2	< 0.02	< 0.1	< 0.02
Chrysene	mg/kg	760	190,000	NS	230	< 0.004	< 0.004	< 0.005		0.043	< 0.004	< 0.004	0.1 J	< 0.004	< 0.004	27	< 0.004	0.24	0.032
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	< 0.004	< 0.004	< 0.005		0.01 J	< 0.004	< 0.004	0.024 J	< 0.004	< 0.004	1.9	< 0.004	0.049 J	0.007 J
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	1.9	< 0.02	< 0.1	< 0.02
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.078	< 0.078	< 0.098		< 0.083	< 0.077	< 0.079	< 0.4	< 0.079	< 0.088	< 0.39	< 0.082	< 0.4	< 0.079
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.078	< 0.078	< 0.098		< 0.083	< 0.077	< 0.079	< 0.4	< 0.079	< 0.088	< 0.39	< 0.082	< 0.4	< 0.079
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.078	< 0.078	< 0.098		< 0.083	< 0.077	< 0.079	< 0.4	< 0.079	< 0.088	< 0.39	< 0.082	< 0.4	< 0.079
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.2	< 0.2	< 0.25		< 0.21	< 0.19	< 0.2	< 1	< 0.2	< 0.22	< 0.99	< 0.2	< 1	< 0.2
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.078	< 0.078	< 0.098		< 0.083	< 0.077	< 0.079	< 0.4	< 0.079	< 0.088	< 0.39	< 0.082	< 0.4	< 0.079
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	< 0.004	< 0.004	< 0.005		0.078	< 0.004	< 0.004	0.14	< 0.004	< 0.004	61	0.004 J	0.34	0.067
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.004	0.012 J	< 0.005		0.004 J	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	3.4	0.005 J	0.021 J	0.007 J
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.004	< 0.005		0.01 J	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	< 0.02	< 0.004	< 0.02	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.2	< 0.2	< 0.25		< 0.21	< 0.19	< 0.2	< 1	< 0.2	< 0.22	< 0.99	< 0.2	< 1	< 0.2
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.039	< 0.039	< 0.049		< 0.041	< 0.039	< 0.039	< 0.2	< 0.04	< 0.044	< 0.2	< 0.041	< 0.2	< 0.039
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	< 0.004	< 0.004	< 0.005		0.03	< 0.004	< 0.004	0.061 J	< 0.004	< 0.004	6.8	< 0.004	0.11	0.017 J
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
Naphthalene	mg/kg	760	190,000	25	**25**	< 0.004	0.18	< 0.005		0.006 J	< 0.004	< 0.004	0.041 J	< 0.004	< 0.004	0.55	< 0.004	0.1	0.049
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.039	< 0.039	< 0.049		< 0.041	< 0.039	< 0.039	< 0.2	< 0.04	< 0.044	< 0.2	< 0.041	< 0.2	< 0.039
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	0.68
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.039	< 0.039	< 0.049		< 0.041	< 0.039	< 0.039	< 0.2	< 0.04	< 0.044	< 0.2	< 0.041	< 0.2	< 0.039
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	< 0.004	0.02	< 0.005		0.053	< 0.004	< 0.004	0.08 J	< 0.004	< 0.004	37	< 0.004	0.26	0.065
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.02	< 0.02	< 0.025		< 0.021	< 0.019	< 0.02	< 0.1	< 0.02	< 0.022	< 0.099	< 0.02	< 0.1	< 0.02
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.078	< 0.078	< 0.098		< 0.083	< 0.077	< 0.079	< 0.4	< 0.079	< 0.088	< 0.39	< 0.082	< 0.4	< 0.079
Pyrene	mg/kg	96,000	190,000	NS	2,200	< 0.004	0.004 J	< 0.005		0.075	< 0.004	< 0.004	0.14	< 0.004	< 0.004	48	0.005 J	0.31	0.051
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.004		0.02	< 0.005	< 0.004	< 0.004	< 0.003	< 0.004	< 0.004	< 0.004	< 0.004	0.005 J	< 0.004	0.007 J

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L01-SB01 17-Dec-15 N 0 - 1 ft	ERM-L01-SB01 18-Dec-15 N 7 - 8 ft	ERM-L01-SB01 18-Dec-15 N 15 - 16 ft	ERM-L01-SB01 13-Jan-16 N 7 - 8 ft	ERM-L01-SB02 17-Dec-15 N 0 - 1 ft	ERM-L01-SB02 18-Dec-15 N 7 - 8 ft	ERM-L01-SB02 18-Dec-15 N 15 - 16 ft	ERM-L01-SB03 17-Dec-15 N 0 - 1 ft	ERM-L01-SB03 18-Dec-15 N 6 - 7 ft	ERM-L01-SB03 18-Dec-15 N 11 - 12 ft	ERM-L01-SB04 14-Oct-15 N 0 - 1 ft	ERM-L01-SB04 21-Oct-15 N 11 - 12 ft	ERM-L01-SB05 14-Oct-15 N 0 - 1 ft	ERM-L01-SB05 21-Oct-15 N 11 - 12 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003		< 0.005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003		< 0.005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.007		0.13	0.011 J	< 0.007	< 0.008	0.016 J	0.013 J	< 0.006	< 0.007	< 0.007	0.035	< 0.007	0.043
Benzene	mg/kg	290	330	0.13	0.5	< 0.0005		< 0.0008	< 0.0006	< 0.0005	< 0.0005	< 0.0004	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	0.002 J	0.052	< 0.001	0.033
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002		< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Ethanol	mg/kg	NS	NS	NS	NS	< 0.096		< 0.17	< 0.12	< 0.096	< 0.11	< 0.086	< 0.099	< 0.09	< 0.1	< 0.11	< 0.098	< 0.1	< 0.091
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002		< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002		< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002		< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002		< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.11		< 0.18	< 0.13	< 0.11	< 0.12	< 0.095	< 0.11	< 0.099	< 0.11	< 0.12	< 0.11	< 0.11	< 0.1
Styrene	mg/kg	10,000	10,000	79	24	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.004		< 0.007	< 0.005	< 0.004	< 0.004	< 0.003	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	mg/kg	10,000	10,000	44	100	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009
Xylenes	mg/kg	8,000	9,100	990	1,000	0.001 J		< 0.002	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	0.013	< 0.0009

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L01-SB05 21-Oct-15 N 19 - 20 ft	ERM-L02-SB01 17-Dec-15 N 0 - 1 ft	ERM-L02-SB01 21-Dec-15 N 11 - 12 ft	ERM-L02-SB01 21-Dec-15 N 14 - 15 ft	ERM-L02-SB02 17-Dec-15 N 0 - 1 ft	ERM-L02-SB02 21-Dec-15 N 11 - 12 ft	ERM-L02-SB02 21-Dec-15 N 14 - 15 ft	ERM-L03-SB01 17-Dec-15 N 0 - 1 ft	ERM-L03-SB01 21-Dec-15 N 7 - 8 ft	ERM-L03-SB01 21-Dec-15 N 12.5 - 13.5 ft	ERM-L03-SB02 17-Dec-15 N 0 - 1 ft	ERM-L03-SB02 21-Dec-15 N 7 - 8 ft	ERM-L04-SB01 15-Oct-15 N 0 - 1 ft	ERM-L04-SB01 21-Oct-15 N 13 - 14 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS													< 0.25	
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected		None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.2	< 5.9	< 6.1	< 6.8	< 6.0	< 6.5	< 6.1	< 5.8	< 5.8	< 6.2	< 5.6	< 6.3	< 5.7	< 6.7
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.22	< 0.21	< 0.21	< 0.24	< 0.21	< 0.23	< 0.21	< 0.20	< 0.20	< 0.21	< 0.20	< 0.23	0.20 J	< 0.23
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	12,100	3,690	16,200	8,500	17,900	15,100	20,900	13,700	12,800	17,900	4,890	14,900	10,000	18,900
Antimony	mg/kg	**1,300**	190,000	NS	**27**	< 0.481	1.46 J	< 0.630	< 0.717	3.53	< 0.699	1.35 J	3.12	< 0.599	< 0.643	1.52 J	< 0.668	19.2	< 0.532
Arsenic	mg/kg	**61**	190,000	NS	**29**	5.01	1.89 J	6.54	3.21	4.19	5.86	< 0.696	4.66	3.05	3.41	2.97	5.31	3.59	3.94
Barium	mg/kg	190,000	190,000	NS	8,200	52.3	57.2	53.9	37.5	60.9	61.3	192	77.0	64.6	104	35.4	59.7	224	104
Beryllium	mg/kg	6,400	190,000	NS	320	0.817	0.430 J	0.841	0.469 J	0.909	0.648	1.46	0.734	0.759	1.09	0.434 J	0.867	0.563	2.83
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.0505	< 0.0569	< 0.0572	< 0.0651	< 0.0579	< 0.0635	< 0.0578	0.171 J	< 0.0543	< 0.0584	< 0.0543	0.914	0.830	< 0.0558
Calcium	mg/kg	NS	NS	NS	NS	1,740	1,510	798	310	2,170	828	900	4,310	996	1,130	2,540	1,220	41,800	755
Chromium	mg/kg	190,000	190,000	NS	190,000	27.9	6.48	39.7	14.2	27.2	31.4	67.0	25.2	28.5	34.0	9.61	31.2	39.6	34.4
Cobalt	mg/kg	960	190,000	NS	160	9.93	4.05	4.91	4.44	7.55	4.18	11.2	7.31	9.37	12.1	5.49	6.37	5.27	11.8
Copper	mg/kg	120,000	190,000	NS	43,000	28.8	18.3	20.1	11.3	19.1	23.9	41.1	16.1	21.0	40.1	7.41	20.1	75.0	26.1
Iron	mg/kg	190,000	190,000	NS	NS	18,100	5,330	14,600	9,110	24,700	30,100	32,300	18,900	20,400	30,400	9,180	25,700	17,500	16,500
Lead	mg/kg	**1,000**	190,000	NS	**450**	10.6	6.31	8.92	6.25	49.3	19.8	8.65	30.8	7.93	12.4	10.8	9.33	**985**	10.9
Magnesium	mg/kg	NS	NS	NS	NS	3,060	279	2,650	1,720	2,850	2,750	10,100	2,870	3,260	5,470	989	3,210	6,810	4,750
Manganese	mg/kg	150,000	190,000	NS	**2,000**	492	20.7	88.1	84.5	216	103	119	193	214	218	85.0	200	255	141
Mercury	mg/kg	510	190,000	NS	**10**	< 0.0122	< 0.0116	< 0.0119	0.0175 J	0.0790 J	0.0406 J	0.0190 J	0.0496 J	0.0191 J	0.0497 J	0.0328 J	< 0.0119	0.216	< 0.0131
Nickel	mg/kg	64,000	190,000	NS	650	16.3	10.5	14.5	11.5	13.8	12.4	57.4	18.2	18.0	23.4	9.46	13.1	24.5	29.5
Potassium	mg/kg	NS	NS	NS	NS	1,900	924	1,680	980	1,510	1,610	6,060	1,340	1,820	3,460	695	1,510	1,830	2,880
Selenium	mg/kg	16,000	190,000	NS	26	1.70 J	1.36 J	1.23 J	< 1.10	3.75	2.12 J	1.27 J	2.26 J	1.46 J	1.26 J	1.27 J	< 1.04	2.86	1.31 J
Silver	mg/kg	16,000	190,000	NS	84	0.647	< 0.209	0.511 J	0.329 J	< 0.213	1.35	2.22	< 0.206	0.846	1.37	< 0.199	< 0.223	0.995	0.598 J
Sodium	mg/kg	NS	NS	NS	NS	1,350	130	116 J	131 J	50.4 J	56.8 J	143	43.3 J	49.1 J	113 J	31.3 J	116 J	163	120 J
Thallium	mg/kg	32	190,000	NS	**14**	< 0.881	< 0.872	9.91	5.13	< 0.887	10.4	**38.8**	< 0.860	12.2	**17.7**	< 0.831	0.947 J	< 0.825	< 0.973
Vanadium	mg/kg	**220**	190,000	NS	**820**	37.6	18.1	43.8	22.2	40.2	43.7	80.2	32.9	31.0	41.6	16.5	41.9	49.9	41.8
Zinc	mg/kg	190,000	190,000	NS	12,000	44.0	5.61	40.3	31.3	53.0	35.9	59.5	122	33.9	60.3	27.3	34.5	381	63.6
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0044	< 0.0042	< 0.0043	< 0.0048	< 0.0043	< 0.023	< 0.0044	< 0.021	< 0.0041	< 0.022	< 0.0040	< 0.0045	< 0.02	< 0.0047
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0056	< 0.0054	< 0.0055	< 0.0062	< 0.0055	< 0.03	< 0.0056	< 0.027	< 0.0053	< 0.028	< 0.0051	< 0.0057	< 0.026	< 0.0061
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.0097	< 0.0093	< 0.0097	< 0.011	< 0.0096	< 0.052	< 0.0098	< 0.046	< 0.0092	< 0.049	< 0.0089	< 0.01	< 0.045	< 0.011
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0040	< 0.0038	< 0.0040	< 0.0044	< 0.0040	< 0.021	< 0.0040	< 0.019	< 0.0038	< 0.02	< 0.0037	< 0.0041	< 0.019	< 0.0043
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0040	< 0.0038	< 0.0040	< 0.0044	< 0.0040	< 0.021	< 0.0040	< 0.019	< 0.0038	< 0.02	< 0.0037	< 0.0041	< 0.019	< 0.0043
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.0040	< 0.0038	< 0.0040	< 0.0044	< 0.0040	< 0.021	< 0.0040	0.39	< 0.0038	< 0.02	< 0.0037	< 0.0041	< 0.019	< 0.0043
Aroclor 1260	mg/kg	**46**	190,000	NS	770	< 0.0059	< 0.0057	< 0.0059	< 0.0066	0.0068 J	< 0.032	< 0.0060	0.15	< 0.0056	< 0.03	< 0.0055	< 0.0061	0.59	< 0.0064
Total PCBs	mg/kg	NS	NS	NS	NS	< 0.0040	< 0.0038	< 0.0040	< 0.0044	0.0068 J	< 0.021	< 0.0040	0.54	< 0.0038	< 0.02	< 0.0037	< 0.0041	0.59	< 0.0043
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.37	< 3.5	< 0.36	< 0.4	< 0.36	< 0.39	< 0.37	< 1.7	< 0.34	< 0.37	< 0.34	< 0.37	< 8.4	< 0.4
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.082	< 0.78	< 0.081	< 0.09	< 0.08	< 0.086	< 0.082	< 0.39	< 0.077	< 0.082	< 0.075	< 0.083	< 1.9	< 0.088
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.008	< 0.078	< 0.008	< 0.009	< 0.008	< 0.009	< 0.008	< 0.039	< 0.008	< 0.008	< 0.008	< 0.008	< 0.19	< 0.009
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L01-SB05 21-Oct-15 N 19 - 20 ft	ERM-L02-SB01 17-Dec-15 N 0 - 1 ft	ERM-L02-SB01 21-Dec-15 N 11 - 12 ft	ERM-L02-SB01 21-Dec-15 N 14 - 15 ft	ERM-L02-SB02 17-Dec-15 N 0 - 1 ft	ERM-L02-SB02 21-Dec-15 N 11 - 12 ft	ERM-L02-SB02 21-Dec-15 N 14 - 15 ft	ERM-L03-SB01 17-Dec-15 N 0 - 1 ft	ERM-L03-SB01 21-Dec-15 N 7 - 8 ft	ERM-L03-SB01 21-Dec-15 N 12.5 - 13.5 ft	ERM-L03-SB02 17-Dec-15 N 0 - 1 ft	ERM-L03-SB02 21-Dec-15 N 7 - 8 ft	ERM-L04-SB01 15-Oct-15 N 0 - 1 ft	ERM-L04-SB01 21-Oct-15 N 13 - 14 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	< 0.004	0.18 J	< 0.004	< 0.004	0.008 J	0.007 J	< 0.004	0.28	< 0.004	0.004 J	0.02	< 0.004	< 0.093	< 0.004
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.12	< 1.2	< 0.12	< 0.13	< 0.12	< 0.13	< 0.12	< 0.58	< 0.11	< 0.12	< 0.11	< 0.12	< 2.8	< 0.13
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.082	< 0.78	< 0.081	< 0.09	< 0.08	< 0.086	< 0.082	< 0.39	< 0.077	< 0.082	< 0.075	< 0.083	< 1.9	< 0.088
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.21	< 1.9	< 0.2	< 0.22	< 0.2	< 0.21	< 0.2	< 0.97	< 0.19	< 0.21	< 0.19	< 0.21	< 4.7	< 0.22
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.004	0.079 J	< 0.004	< 0.004	0.029	< 0.004	< 0.004	0.93	< 0.004	< 0.004	< 0.004	< 0.004	0.19 J	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.004	< 0.039	< 0.004	< 0.004	0.024	< 0.004	< 0.004	0.12	< 0.004	< 0.004	0.004 J	< 0.004	0.13 J	< 0.004
Anthracene	mg/kg	190,000	190,000	NS	350	< 0.004	0.069 J	< 0.004	< 0.004	0.09	< 0.004	< 0.004	2.8	< 0.004	< 0.004	0.007 J	< 0.004	0.58	< 0.004
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	< 0.004	1.2	< 0.004	< 0.004	0.33	< 0.004	< 0.004	8.1	< 0.004	0.011 J	0.031	< 0.004	2.9	< 0.004
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	< 0.004	0.89	< 0.004	< 0.004	0.3	0.004 J	< 0.004	7.1	0.004 J	0.014 J	0.024	< 0.004	3.4	< 0.004
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	< 0.004	1.1	< 0.004	< 0.004	0.41	0.007 J	< 0.004	9.4	0.004 J	0.015 J	0.049	< 0.004	4.5	< 0.004
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	< 0.004	0.58	0.007 J	< 0.004	0.2	0.007 J	0.004 J	5.1	0.005 J	0.013 J	0.024	< 0.004	2.8	< 0.004
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	< 0.004	< 0.039	< 0.004	< 0.004	0.17	< 0.004	< 0.004	4	< 0.004	0.011 J	0.015 J	< 0.004	1.7	< 0.004
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.082	< 0.78	< 0.081	< 0.09	< 0.08	< 0.086	< 0.082	< 0.39	< 0.077	< 0.082	< 0.075	< 0.083	< 1.9	< 0.088
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.082	< 0.78	0.16 J	< 0.09	< 0.08	< 0.086	< 0.082	1	< 0.077	< 0.082	< 0.075	< 0.083	< 1.9	< 0.088
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.021	< 0.19	< 0.02	< 0.022	0.034 J	< 0.021	< 0.02	1.4	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
Chrysene	mg/kg	760	190,000	NS	230	< 0.004	3	< 0.004	< 0.004	0.31	< 0.004	< 0.004	7.7	< 0.004	0.012 J	0.087	< 0.004	3.1	< 0.004
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	< 0.004	0.37	< 0.004	< 0.004	0.054	< 0.004	< 0.004	1.3	< 0.004	0.005 J	0.008 J	< 0.004	0.79	< 0.004
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	0.76	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.082	< 0.78	< 0.081	< 0.09	< 0.08	< 0.086	< 0.082	< 0.39	< 0.077	< 0.082	< 0.075	< 0.083	< 1.9	< 0.088
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.082	< 0.78	< 0.081	< 0.09	< 0.08	< 0.086	< 0.082	< 0.39	< 0.077	< 0.082	< 0.075	< 0.083	< 1.9	< 0.088
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.082	< 0.78	< 0.081	< 0.09	< 0.08	< 0.086	< 0.082	< 0.39	< 0.077	< 0.082	< 0.075	< 0.083	< 1.9	< 0.088
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.21	< 1.9	< 0.2	< 0.22	< 0.2	< 0.21	< 0.2	< 0.97	< 0.19	< 0.21	< 0.19	< 0.21	< 4.7	< 0.22
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.082	< 0.78	< 0.081	< 0.09	< 0.08	< 0.086	< 0.082	< 0.39	< 0.077	< 0.082	< 0.075	< 0.083	< 1.9	< 0.088
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	< 0.004	0.23	< 0.004	< 0.004	0.57	0.004 J	< 0.004	15	0.004 J	0.025	0.042	< 0.004	5.3	< 0.004
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.004	0.058 J	< 0.004	< 0.004	0.028	< 0.004	< 0.004	0.99	< 0.004	< 0.004	0.008 J	< 0.004	0.19 J	< 0.004
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.039	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.019	< 0.004	< 0.004	< 0.004	< 0.004	< 0.093	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.21	< 1.9	< 0.2	< 0.22	< 0.2	< 0.21	< 0.2	< 0.97	< 0.19	< 0.21	< 0.19	< 0.21	< 4.7	< 0.22
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.041	< 0.39	< 0.04	< 0.045	< 0.04	< 0.043	< 0.041	< 0.19	< 0.038	< 0.041	< 0.038	< 0.041	< 0.93	< 0.044
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	< 0.004	0.22	< 0.004	< 0.004	0.18	0.005 J	< 0.004	4.5	0.004 J	0.01 J	0.019	< 0.004	2.4	< 0.004
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
Naphthalene	mg/kg	760	190,000	25	**25**	< 0.004	0.65	0.007 J	< 0.004	0.011 J	< 0.004	< 0.004	0.51	< 0.004	0.006 J	0.013 J	< 0.004	< 0.093	< 0.004
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.041	< 0.39	< 0.04	< 0.045	< 0.04	< 0.043	< 0.041	< 0.19	< 0.038	< 0.041	< 0.038	< 0.041	< 0.93	< 0.044
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.041	< 0.39	< 0.04	< 0.045	< 0.04	< 0.043	< 0.041	< 0.19	< 0.038	< 0.041	< 0.038	< 0.041	< 0.93	< 0.044
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	< 0.004	0.5	< 0.004	< 0.004	0.46	< 0.004	< 0.004	12	< 0.004	0.013 J	0.1	< 0.004	2.3	< 0.004
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.021	< 0.19	< 0.02	< 0.022	< 0.02	< 0.021	< 0.02	< 0.097	< 0.019	< 0.021	< 0.019	< 0.021	< 0.47	< 0.022
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.082	< 0.78	< 0.081	< 0.09	< 0.08	< 0.086	< 0.082	< 0.39	< 0.077	< 0.082	< 0.075	< 0.083	< 1.9	< 0.088
Pyrene	mg/kg	96,000	190,000	NS	2,200	< 0.004	1.3	< 0.004	< 0.004	0.59	0.005 J	< 0.004	14	0.004 J	0.022	0.041	< 0.004	4.7	< 0.004
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	0.001 J	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	0.004 J	< 0.008	< 0.005	< 0.004	< 0.003	0.006 J	< 0.004	< 0.004	< 0.004	0.003 J	< 0.004	< 0.005	< 0.004	0.007 J

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L01-SB05 21-Oct-15 N 19 - 20 ft	ERM-L02-SB01 17-Dec-15 N 0 - 1 ft	ERM-L02-SB01 21-Dec-15 N 11 - 12 ft	ERM-L02-SB01 21-Dec-15 N 14 - 15 ft	ERM-L02-SB02 17-Dec-15 N 0 - 1 ft	ERM-L02-SB02 21-Dec-15 N 11 - 12 ft	ERM-L02-SB02 21-Dec-15 N 14 - 15 ft	ERM-L03-SB01 17-Dec-15 N 0 - 1 ft	ERM-L03-SB01 21-Dec-15 N 7 - 8 ft	ERM-L03-SB01 21-Dec-15 N 12.5 - 13.5 ft	ERM-L03-SB02 17-Dec-15 N 0 - 1 ft	ERM-L03-SB02 21-Dec-15 N 7 - 8 ft	ERM-L04-SB01 15-Oct-15 N 0 - 1 ft	ERM-L04-SB01 21-Oct-15 N 13 - 14 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.006	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.002	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.006	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.002	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.027	< 0.013	< 0.009	< 0.007	< 0.006	0.057	< 0.006	< 0.007	< 0.008	0.028	< 0.007	0.028	< 0.007	0.034
Benzene	mg/kg	290	330	0.13	0.5	< 0.0005	< 0.0009	< 0.0007	< 0.0005	< 0.0004	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0004	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620	0.051	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	0.001 J	< 0.001	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	0.017	< 0.0009	< 0.001	0.003 J	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.004	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	0.002 J	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/kg	NS	NS	NS	NS	< 0.095	< 0.19	< 0.13	< 0.1	< 0.085	< 0.11	< 0.09	< 0.094	< 0.11	< 0.08	< 0.1	< 0.12	0.19 J	< 0.11
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.004	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.004	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.004	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	0.002 J	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.004	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.1	< 0.21	< 0.14	< 0.11	< 0.094	< 0.12	< 0.099	< 0.1	< 0.12	< 0.087	< 0.11	< 0.13	< 0.11	< 0.12
Styrene	mg/kg	10,000	10,000	79	24	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	0.002 J	< 0.0009	< 0.001	0.002 J	< 0.001	< 0.001	< 0.001	< 0.001
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.004	< 0.008	< 0.005	< 0.004	< 0.003	< 0.004	< 0.004	< 0.004	< 0.004	< 0.003	< 0.004	< 0.005	< 0.004	< 0.004
Toluene	mg/kg	10,000	10,000	44	100	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.0009	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.001	< 0.001

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L04-SB01 21-Oct-15 N 22 - 23 ft	ERM-L04-SB02 15-Oct-15 N 0 - 1 ft	ERM-L04-SB02 21-Oct-15 N 5 - 10 ft	ERM-L06-SB01 17-Dec-15 N 0 - 1 ft	ERM-L06-SB01 18-Dec-15 N 11 - 12 ft	ERM-L06-SB01 18-Dec-15 N 19 - 20 ft	ERM-L06-SB01 14-Jan-16 N 11 - 12 ft	ERM-L06-SB01 14-Jan-16 N 19 - 20 ft	ERM-L06-SB02 17-Dec-15 N 0 - 1 ft	ERM-L06-SB02 18-Dec-15 N 10 - 11 ft	ERM-L06-SB02 18-Dec-15 N 18 - 19 ft	ERM-L06-SB02 14-Jan-16 N 10 - 11 ft	ERM-L06-SB02 14-Jan-16 N 18 - 19 ft	ERM-L06-SB04 17-Dec-15 N 0 - 1 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS		0.5	3											
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected			None Detected	None Detected	None Detected			None Detected	None Detected	None Detected			None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.1	< 5.6	< 5.9	< 6.2			< 6.0	< 12	< 5.9			< 6.2	< 7.0	< 6.1
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.22	< 0.20	1.3	< 0.22	< 0.21	< 0.23			< 0.21	< 0.21	< 0.28			0.42 J
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	18,600	9,560	9,070	16,500	13,800	8,030			14,900	17,200	10,400			8,370
Antimony	mg/kg	**1,300**	190,000	NS	**27**	0.748 J	< 0.443	**32.2**	7.24	< 0.637	< 0.676			5.17	< 0.668	< 0.868			6.31
Arsenic	mg/kg	**61**	190,000	NS	**29**	4.45	5.37	7.63	4.29	4.80	1.47 J			1.91 J	5.03	3.66			4.22
Barium	mg/kg	190,000	190,000	NS	8,200	88.1	161	390	73.9	84.2	29.4			124	64.3	40.7			1,360
Beryllium	mg/kg	6,400	190,000	NS	320	0.647	1.46	1.02	0.925	0.851	0.335 J			0.896	0.958	0.522 J			0.706
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.0523	0.800	4.84	0.397 J	< 0.0578	< 0.0613			0.273 J	< 0.0606	< 0.0788			10.9
Calcium	mg/kg	NS	NS	NS	NS	854	11,300	45,700	4,010	1,570	619			14,300	604	333			72,500
Chromium	mg/kg	190,000	190,000	NS	190,000	23.4	29.2	57.2	27.1	29.6	18.8			32.7	29.5	25.0			29.6
Cobalt	mg/kg	960	190,000	NS	160	14.4	8.02	6.54	6.97	6.97	5.48			8.91	8.63	4.73			5.70
Copper	mg/kg	120,000	190,000	NS	43,000	13.0	41.5	101	38.6	20.1	11.0			40.1	25.1	15.2			106
Iron	mg/kg	190,000	190,000	NS	NS	28,800	20,000	25,300	21,300	20,400	11,300			24,100	22,700	13,200			36,800
Lead	mg/kg	**1,000**	190,000	NS	**450**	11.7	106	321	**544**	10.6	5.31			84.6	9.85	6.45			222
Magnesium	mg/kg	NS	NS	NS	NS	2,720	4,920	5,680	2,720	3,530	1,740			5,720	2,820	2,440			4,260
Manganese	mg/kg	150,000	190,000	NS	**2,000**	180	190	392	167	157	94.3			223	181	162			292
Mercury	mg/kg	510	190,000	NS	**10**	0.0172 J	0.569	**10.6**	0.0878 J	< 0.0117	< 0.0123			0.404	< 0.0120	< 0.0155			0.747
Nickel	mg/kg	64,000	190,000	NS	650	13.7	54.0	36.4	25.1	20.9	10.2			23.9	12.4	14.5			28.8
Potassium	mg/kg	NS	NS	NS	NS	1,380	1,900	2,070	1,830	1,340	913			4,120	1,270	1,180			1,910
Selenium	mg/kg	16,000	190,000	NS	26	4.08	4.04	4.85	2.79	1.75 J	< 1.04			3.90	< 1.03	< 1.33			5.58
Silver	mg/kg	16,000	190,000	NS	84	0.898	0.971	1.16	< 0.222	0.702	0.400 J			< 0.207	0.719	0.439 J			0.656
Sodium	mg/kg	NS	NS	NS	NS	434	115	567	230	163	72.7 J			190	371	2,300			986
Thallium	mg/kg	32	190,000	NS	**14**	< 0.912	1.11 J	< 0.885	< 0.925	9.67	4.67			1.08 J	12.2	7.33			< 0.900
Vanadium	mg/kg	**220**	190,000	NS	**820**	33.2	**278**	92.3	40.9	39.2	19.2			40.2	37.2	31.8			62.8
Zinc	mg/kg	190,000	190,000	NS	12,000	38.1	164	864	111	39.9	31.8			139	34.6	27.3			4,710
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0044	< 0.02	< 2.1	< 0.0044	< 0.0043	< 0.0046			< 0.021	< 0.0044	< 0.0058			< 0.022
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0056	< 0.025	< 2.7	< 0.0056	< 0.0055	< 0.0059			< 0.027	< 0.0057	< 0.0074			< 0.028
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.0097	< 0.044	< 4.7	< 0.0098	< 0.0095	< 0.01			< 0.047	< 0.0099	< 0.013			< 0.048
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0040	< 0.018	< 1.9	< 0.0040	< 0.0039	< 0.0042			< 0.019	< 0.0041	< 0.0053			< 0.02
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0040	< 0.018	< 1.9	< 0.0040	< 0.0039	< 0.0042			< 0.019	< 0.0041	< 0.0053			< 0.02
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.0040	< 0.018	< 1.9	< 0.0040	< 0.0039	< 0.0042			< 0.019	< 0.0041	< 0.0053			< 0.02
Aroclor 1260	mg/kg	**46**	190,000	NS	770	< 0.0060	0.54	100	< 0.0060	< 0.0058	< 0.0063			0.56	< 0.0060	< 0.0079			0.29
Total PCBs	mg/kg	NS	NS	NS	NS	< 0.0040	0.54	100	< 0.0040	< 0.0039	< 0.0042			0.56	< 0.0041	< 0.0053			0.29
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.02	< 0.46	4	< 0.02	< 0.02	< 0.021			0.24	< 0.021	< 0.13			< 1
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	0.78			< 1
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	1			< 1
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			0.02 J	< 0.021	< 0.13			< 1
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.37	< 8.3	< 8.7	< 0.37	< 0.36	< 0.38			< 0.35	< 0.37	< 2.4			< 18
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.082	< 1.8	< 1.9	< 0.081	< 0.079	< 0.085			< 0.078	< 0.082	< 0.54			< 4
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.008	< 0.18	< 0.19	< 0.008	< 0.008	< 0.009			< 0.008	< 0.008	< 0.054			< 0.4
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L04-SB01 21-Oct-15 N 22 - 23 ft	ERM-L04-SB02 15-Oct-15 N 0 - 1 ft	ERM-L04-SB02 21-Oct-15 N 5 - 10 ft	ERM-L06-SB01 17-Dec-15 N 0 - 1 ft	ERM-L06-SB01 18-Dec-15 N 11 - 12 ft	ERM-L06-SB01 18-Dec-15 N 19 - 20 ft	ERM-L06-SB01 14-Jan-16 N 11 - 12 ft	ERM-L06-SB01 14-Jan-16 N 19 - 20 ft	ERM-L06-SB02 17-Dec-15 N 0 - 1 ft	ERM-L06-SB02 18-Dec-15 N 10 - 11 ft	ERM-L06-SB02 18-Dec-15 N 18 - 19 ft	ERM-L06-SB02 14-Jan-16 N 10 - 11 ft	ERM-L06-SB02 14-Jan-16 N 18 - 19 ft	ERM-L06-SB04 17-Dec-15 N 0 - 1 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	< 0.004	0.097 J	0.15 J	0.006 J	< 0.004	< 0.004			0.053	< 0.004	< 0.027			< 0.2
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.12	< 2.8	< 2.9	< 0.12	< 0.12	< 0.13			< 0.12	< 0.12	< 0.81			< 6
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.082	< 1.8	< 1.9	< 0.081	< 0.079	< 0.085			< 0.078	< 0.082	< 0.54			< 4
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.2	< 4.6	< 4.9	< 0.2	< 0.2	< 0.21			< 0.19	< 0.21	< 1.3			< 10
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.004	< 0.092	< 0.097	< 0.004	< 0.004	< 0.004			0.1	< 0.004	< 0.027			< 0.2
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.004	< 0.092	< 0.097	0.005 J	< 0.004	< 0.004			0.082	< 0.004	< 0.027			< 0.2
Anthracene	mg/kg	190,000	190,000	NS	350	0.015 J	0.19 J	0.12 J	< 0.004	< 0.004	< 0.004			0.47	< 0.004	< 0.027			< 0.2
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.043	0.85	0.33 J	0.025	< 0.004	< 0.004			0.64	< 0.004	< 0.027			0.27 J
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.036	0.86	0.43 J	0.033	0.006 J	< 0.004			0.64	0.006 J	< 0.027			0.35 J
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.057	0.99	0.45 J	0.044	0.005 J	< 0.004			0.84	0.006 J	0.028 J			0.64 J
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.029	0.65	0.84	0.02 J	< 0.004	0.005 J			0.4	0.007 J	0.034 J			1.3
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.022	0.58	0.16 J	0.017 J	0.004 J	< 0.004			0.3	< 0.004	< 0.027			0.26 J
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.082	< 1.8	< 1.9	< 0.081	< 0.079	< 0.085			< 0.078	< 0.082	< 0.54			< 4
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.082	< 1.8	8.5	< 0.081	< 0.079	< 0.085			0.64	< 0.082	< 0.54			< 4
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			0.074	< 0.021	< 0.13			< 1
Chrysene	mg/kg	760	190,000	NS	230	0.04	1	0.42 J	0.036	< 0.004	< 0.004			0.61	< 0.004	< 0.027			0.46 J
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.008 J	0.21 J	0.15 J	0.005 J	0.005 J	< 0.004			0.12	0.005 J	< 0.027			< 0.2
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			0.16	< 0.021	< 0.13			< 1
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.082	< 1.8	< 1.9	< 0.081	< 0.079	< 0.085			< 0.078	< 0.082	< 0.54			< 4
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.082	< 1.8	< 1.9	< 0.081	< 0.079	< 0.085			< 0.078	< 0.082	< 0.54			< 4
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.082	< 1.8	< 1.9	< 0.081	< 0.079	< 0.085			< 0.078	< 0.082	< 0.54			< 4
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.2	< 4.6	< 4.9	< 0.2	< 0.2	< 0.21			< 0.19	< 0.21	< 1.3			< 10
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.082	< 1.8	< 1.9	< 0.081	< 0.079	< 0.085			< 0.078	< 0.082	< 0.54			< 4
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.098	1.5	0.57	0.044	< 0.004	< 0.004			1.3	< 0.004	< 0.027			0.3 J
Fluorene	mg/kg	130,000	190,000	NS	3,800	0.005 J	< 0.092	< 0.097	< 0.004	< 0.004	< 0.004			0.23	< 0.004	< 0.027			< 0.2
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.092	0.22 J	< 0.004	< 0.004	< 0.004			< 0.004	< 0.004	< 0.027			< 0.2
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.2	< 4.6	< 4.9	< 0.2	< 0.2	< 0.21			< 0.19	< 0.21	< 1.3			< 10
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.041	< 0.92	< 0.97	< 0.041	< 0.04	< 0.043			< 0.039	< 0.041	< 0.27			< 2
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.024	0.63	0.3 J	0.023	0.007 J	< 0.004			0.37	0.006 J	0.032 J			0.52 J
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
Naphthalene	mg/kg	760	190,000	25	**25**	< 0.004	< 0.092	< 0.097	0.005 J	< 0.004	0.005 J			0.047	< 0.004	< 0.027			< 0.2
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.041	< 0.92	< 0.97	< 0.041	< 0.04	< 0.043			< 0.039	< 0.041	< 0.27			< 2
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			0.024 J	< 0.021	< 0.13			< 1
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.041	< 0.92	< 0.97	< 0.041	< 0.04	< 0.043			< 0.039	< 0.041	< 0.27			< 2
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.071	0.71	0.49 J	0.029	< 0.004	< 0.004			1.3	< 0.004	< 0.027			< 0.2
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.02	< 0.46	< 0.49	< 0.02	< 0.02	< 0.021			< 0.019	< 0.021	< 0.13			< 1
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.082	< 1.8	< 1.9	< 0.081	< 0.079	< 0.085			< 0.078	< 0.082	< 0.54			< 4
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.083	1.5	0.58	0.043	< 0.004	< 0.004			1.2	< 0.004	< 0.027			0.36 J
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.004	< 0.004	< 0.004	< 0.004			< 0.003	0.61	< 0.004			< 0.004	< 0.2	< 0.007

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L04-SB01 21-Oct-15 N 22 - 23 ft	ERM-L04-SB02 15-Oct-15 N 0 - 1 ft	ERM-L04-SB02 21-Oct-15 N 5 - 10 ft	ERM-L06-SB01 17-Dec-15 N 0 - 1 ft	ERM-L06-SB01 18-Dec-15 N 11 - 12 ft	ERM-L06-SB01 18-Dec-15 N 19 - 20 ft	ERM-L06-SB01 14-Jan-16 N 11 - 12 ft	ERM-L06-SB01 14-Jan-16 N 19 - 20 ft	ERM-L06-SB02 17-Dec-15 N 0 - 1 ft	ERM-L06-SB02 18-Dec-15 N 10 - 11 ft	ERM-L06-SB02 18-Dec-15 N 18 - 19 ft	ERM-L06-SB02 14-Jan-16 N 10 - 11 ft	ERM-L06-SB02 14-Jan-16 N 18 - 19 ft	ERM-L06-SB04 17-Dec-15 N 0 - 1 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.003	< 0.003	< 0.003			< 0.003	< 0.018	< 0.003			< 0.003	< 0.15	< 0.005
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.003	< 0.003	< 0.003			< 0.003	< 0.018	< 0.003			< 0.003	< 0.15	< 0.005
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.007	< 0.006	< 0.008	< 0.007			0.01 J	3.1	< 0.006			0.026	< 0.36	< 0.012
Benzene	mg/kg	290	330	0.13	0.5	< 0.0005	< 0.0004	< 0.0005	< 0.0005			< 0.0004	< 0.003	< 0.0005			< 0.0006	< 0.026	< 0.0009
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	0.009 J	0.001 J			0.001 J	< 0.051	< 0.002
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	0.062 J	< 0.002
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.002			< 0.002	< 0.012	< 0.002			< 0.002	< 0.1	< 0.003
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Ethanol	mg/kg	NS	NS	NS	NS	< 0.098	< 0.089	< 0.11	< 0.1			< 0.086	< 0.6	< 0.091			< 0.11	< 5.1	< 0.17
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.002			< 0.002	< 0.012	< 0.002			< 0.002	< 0.1	< 0.003
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.002			< 0.002	< 0.012	< 0.002			< 0.002	< 0.1	< 0.003
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.002			< 0.002	< 0.012	< 0.002			< 0.002	< 0.1	< 0.003
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002			< 0.002	< 0.012	< 0.002			< 0.002	< 0.1	< 0.003
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.11	< 0.098	< 0.12	< 0.11			< 0.094	< 0.66	< 0.1			< 0.12	< 5.6	< 0.19
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.004	< 0.004	< 0.004	< 0.004			< 0.003	< 0.024	< 0.004			< 0.004	< 0.2	< 0.007
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.0009	< 0.001	< 0.001			< 0.0009	< 0.006	< 0.0009			< 0.001	< 0.051	< 0.002

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

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Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L06-SB05 17-Dec-15 N 0 - 1 ft	ERM-L06-SB06 17-Dec-15 N 0 - 1 ft	ERM-L06-SB06 21-Dec-15 N 9 - 10 ft	ERM-L06-SB06 21-Dec-15 N 13 - 14 ft	ERM-L06-SB08 17-Dec-15 N 0 - 1 ft	ERM-L07-SB01 17-Dec-15 N 0 - 1 ft	ERM-L07-SB01 21-Dec-15 N 11 - 12 ft	ERM-L07-SB01 21-Dec-15 N 22 - 23 ft	ERM-L07-SB02 23-Dec-15 N 0 - 1 ft	ERM-L07-SB02 18-Jan-16 N 6 - 7 ft	ERM-L07-SB02 18-Jan-16 N 10 - 11 ft	ERM-L08-SB01 15-Dec-15 N 0 - 1 ft	ERM-L08-SB02 15-Dec-15 N 0 - 1 ft	ERM-L08-SB02 08-Jan-16 N 7.5 - 8.5 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS														
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 5.7	< 6.0	< 6.2	< 6.3	< 5.7	< 6.0	< 6.1	< 6.1	< 6.1	< 6.0	< 6.2	< 7.4	< 7.5	< 5.7
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.20	< 0.21	< 0.22	< 0.23	< 0.21	< 0.21	< 0.22	< 0.22	< 0.22	< 0.21	< 0.22	< 0.26	< 0.26	< 0.20
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	8,080	9,210	17,000	10,000	20,500	14,500	9,800	8,080	17,500	13,300	16,000	14,100	7,130	28,100
Antimony	mg/kg	**1,300**	190,000	NS	**27**	3.34	8.59	< 0.645	< 0.662	7.56	4.37	< 0.635	< 0.650	< 0.547	< 0.467	< 0.515	< 4.01	< 0.606	< 2.28
Arsenic	mg/kg	**61**	190,000	NS	**29**	2.57	4.37	6.18	2.18 J	3.22	8.13	2.87	2.04 J	5.34	3.54	1.76 J	10.5	**29.8**	3.32
Barium	mg/kg	190,000	190,000	NS	8,200	95.6	182	55.6	33.9	421	135	34.8	34.2	57.7	39.9	51.8	233	324	357
Beryllium	mg/kg	6,400	190,000	NS	320	0.552	0.518 J	0.801	0.553 J	0.758	1.04	0.631	0.409 J	0.827	0.598	0.578	1.79	4.84	1.68
Cadmium	mg/kg	1,600	190,000	NS	38	0.237 J	< 0.0569	< 0.0585	< 0.0601	0.162 J	0.227 J	0.584 J	0.315 J	0.0790 J	< 0.212	< 0.0467	0.488 J	0.538 J	< 0.0414
Calcium	mg/kg	NS	NS	NS	NS	56,500	32,000	837	940	14,000	6,210	671	227	4,070	849	771	13,100	11,100	1,420
Chromium	mg/kg	190,000	190,000	NS	190,000	21.2	104	31.5	23.5	44.2	26.9	16.9	15.8	28.5	23.4	32.5	40.1	31.1	63.4
Cobalt	mg/kg	960	190,000	NS	160	5.78	7.65	4.18	8.54	11.9	8.14	5.86	3.20	5.26	7.15	4.55	7.92	9.67	20.0
Copper	mg/kg	120,000	190,000	NS	43,000	23.4	51.5	61.7	14.6	60.2	45.9	10.5	9.51	22.0	18.6	18.4	60.3	85.1	137
Iron	mg/kg	190,000	190,000	NS	NS	15,600	38,000	20,100	10,700	36,000	27,800	15,700	7,100	21,600	25,300	12,900	27,400	32,800	42,200
Lead	mg/kg	**1,000**	190,000	NS	**450**	19.9	41.8	22.4	6.84	41.3	110	7.43	6.23	18.3	6.25	7.55	217	**586**	40.2
Magnesium	mg/kg	NS	NS	NS	NS	33,400	17,100	2,380	3,200	9,260	2,640	1,910	1,880	2,380	2,300	2,860	4,720	4,910	10,300
Manganese	mg/kg	150,000	190,000	NS	**2,000**	181	1,680	75.7	217	430	277	182	66.3	232	240	82.1	412	213	355
Mercury	mg/kg	510	190,000	NS	**10**	0.0217 J	0.179	0.115 J	0.105 J	0.748	0.134	< 0.0117	< 0.0114	0.0337 J	< 0.0116	< 0.0122	0.310	**12.5**	0.0251 J
Nickel	mg/kg	64,000	190,000	NS	650	18.9	20.9	14.5	14.3	29.2	20.9	11.6	9.41	10.6	11.1	14.5	68.3	293	41.6
Potassium	mg/kg	NS	NS	NS	NS	3,110	4,970	1,360	1,120	7,740	1,320	1,140	1,080	1,250	1,430	1,780	1,670	1,750	9,490
Selenium	mg/kg	16,000	190,000	NS	26	1.93 J	5.97	< 0.991	< 1.02	5.01	3.70	< 0.989	< 1.01	< 0.851	1.49 J	< 0.801	1.77 J	3.21	< 3.55
Silver	mg/kg	16,000	190,000	NS	84	< 0.198	0.550 J	0.781	0.320 J	< 0.202	0.391 J	< 0.212	< 0.217	< 0.182	< 0.156	< 0.172	0.223 J	0.510 J	0.545
Sodium	mg/kg	NS	NS	NS	NS	246	390	76.6 J	115 J	625	170	55.8 J	106 J	83.0 J	40.1 J	106	163	267	130
Thallium	mg/kg	32	190,000	NS	**14**	1.23 J	1.80 J	11.7	6.46	2.48 J	< 0.898	< 0.883	< 0.902	1.29 J	< 0.649	< 0.715	< 1.11	< 1.11	5.86
Vanadium	mg/kg	**220**	190,000	NS	**820**	50.6	58.9	37.5	29.4	67.1	35.1	21.9	18.1	39.4	34.7	35.6	**275**	**1,110**	84.0
Zinc	mg/kg	190,000	190,000	NS	12,000	54.8	84.6	128	58.5	162	152	30.3	27.8	39.6	26.7	40.3	958	369	378
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0041	< 0.0043	< 0.0044	< 0.0045	< 0.02	< 0.044	< 0.0044	< 0.0044	< 0.0043	< 0.0043	< 0.0044	< 0.053	< 0.27	< 0.0041
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0052	< 0.0055	< 0.0057	< 0.0058	< 0.026	< 0.056	< 0.0056	< 0.0056	< 0.0056	< 0.0055	< 0.0057	< 0.068	< 0.34	< 0.0052
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.0091	< 0.0096	< 0.0099	< 0.01	< 0.046	< 0.097	< 0.0097	< 0.0097	< 0.0097	< 0.0095	< 0.0099	< 0.12	< 0.6	< 0.0091
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0038	< 0.0039	< 0.0041	< 0.0042	< 0.019	< 0.04	< 0.0040	< 0.0040	< 0.0040	< 0.0039	< 0.0041	< 0.049	< 0.25	< 0.0037
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0038	< 0.0039	< 0.0041	< 0.0042	< 0.019	< 0.04	< 0.0040	< 0.0040	< 0.0040	< 0.0039	< 0.0041	< 0.049	< 0.25	< 0.0037
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.0038	< 0.0039	< 0.0041	< 0.0042	0.78	1.4	0.037	< 0.0040	< 0.0040	< 0.0039	< 0.0041	< 0.049	< 0.25	< 0.0037
Aroclor 1260	mg/kg	**46**	190,000	NS	770	0.045	0.064	< 0.0060	< 0.0062	0.25	< 0.059	< 0.0059	< 0.0059	< 0.0059	< 0.0058	< 0.0060	0.98	3.7	< 0.0056
Total PCBs	mg/kg	NS	NS	NS	NS	0.045	0.064	< 0.0041	< 0.0042	1	1.4	0.037	< 0.0040	< 0.0040	< 0.0039	< 0.0041	0.98	3.7	< 0.0037
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 17	< 18	< 0.37	< 0.37	< 0.34	< 0.36	< 0.36	< 0.36	< 0.37	< 0.36	< 0.37	< 4.4	< 4.5	< 0.34
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 3.8	< 3.9	< 0.082	< 0.083	< 0.076	< 0.081	< 0.08	< 0.081	< 0.081	< 0.079	< 0.082	< 0.99	< 1	< 0.075
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.38	< 0.39	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.099	< 0.1	< 0.008
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L06-SB05 17-Dec-15 N 0 - 1 ft	ERM-L06-SB06 17-Dec-15 N 0 - 1 ft	ERM-L06-SB06 21-Dec-15 N 9 - 10 ft	ERM-L06-SB06 21-Dec-15 N 13 - 14 ft	ERM-L06-SB08 17-Dec-15 N 0 - 1 ft	ERM-L07-SB01 17-Dec-15 N 0 - 1 ft	ERM-L07-SB01 21-Dec-15 N 11 - 12 ft	ERM-L07-SB01 21-Dec-15 N 22 - 23 ft	ERM-L07-SB02 23-Dec-15 N 0 - 1 ft	ERM-L07-SB02 18-Jan-16 N 6 - 7 ft	ERM-L07-SB02 18-Jan-16 N 10 - 11 ft	ERM-L08-SB01 15-Dec-15 N 0 - 1 ft	ERM-L08-SB02 15-Dec-15 N 0 - 1 ft	ERM-L08-SB02 08-Jan-16 N 7.5 - 8.5 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	< 0.19	< 0.2	< 0.004	0.004 J	0.049	0.12	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	0.051 J	0.81	0.004 J
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 5.7	< 5.9	< 0.12	< 0.12	< 0.11	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 1.5	< 1.5	< 0.11
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 3.8	< 3.9	< 0.082	< 0.083	< 0.076	< 0.081	< 0.08	< 0.081	< 0.081	< 0.079	< 0.082	< 0.99	< 1	< 0.075
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 9.4	< 9.8	< 0.21	< 0.21	< 0.19	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.21	< 2.5	< 2.5	< 0.19
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.19	< 0.2	< 0.004	< 0.004	0.015 J	0.067	< 0.004	< 0.004	0.004 J	< 0.004	< 0.004	< 0.049	0.11 J	0.005 J
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.19	< 0.2	< 0.004	< 0.004	0.016 J	0.021	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.049	0.16 J	0.015 J
Anthracene	mg/kg	190,000	190,000	NS	350	< 0.19	< 0.2	0.007 J	< 0.004	0.057	0.18	< 0.004	< 0.004	0.015 J	< 0.004	< 0.004	0.063 J	0.26 J	0.019 J
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.45 J	0.22 J	0.021	0.006 J	0.21	0.44	0.007 J	< 0.004	0.049	< 0.004	< 0.004	0.33	0.91	0.073
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.67 J	< 0.2	0.023	0.008 J	0.22	0.37	0.006 J	< 0.004	0.055	< 0.004	0.004 J	0.31	0.87	0.07
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.9 J	0.25 J	0.03	0.01 J	0.32	0.51	0.009 J	< 0.004	0.08	< 0.004	< 0.004	0.45	1.3	0.1
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.73 J	< 0.2	0.02 J	0.006 J	0.22	0.28	0.006 J	< 0.004	< 0.004	< 0.004	< 0.004	0.24 J	0.62	0.05
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.39 J	< 0.2	0.017 J	0.005 J	0.13	0.24	0.005 J	< 0.004	0.035	< 0.004	0.004 J	0.17 J	0.46	0.04
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 3.8	< 3.9	< 0.082	< 0.083	< 0.076	< 0.081	< 0.08	< 0.081	< 0.081	< 0.079	< 0.082	< 0.99	< 1	< 0.075
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 3.8	< 3.9	< 0.082	< 0.083	0.084 J	1.3	< 0.08	< 0.081	< 0.081	< 0.079	< 0.082	< 0.99	< 1	< 0.075
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.94	< 0.98	< 0.021	< 0.021	0.027 J	0.069	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
Chrysene	mg/kg	760	190,000	NS	230	0.6 J	0.22 J	0.024	0.012 J	0.23	0.55	0.006 J	< 0.004	0.063	< 0.004	< 0.004	0.39	1.2	0.077
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	< 0.19	< 0.2	0.009 J	0.007 J	0.059	0.082	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	0.074 J	0.21 J	0.019 J
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	0.063	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	0.28 J	< 0.019
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 3.8	< 3.9	< 0.082	< 0.083	< 0.076	0.47	< 0.08	< 0.081	< 0.081	< 0.079	< 0.082	< 0.99	< 1	< 0.075
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 3.8	< 3.9	< 0.082	< 0.083	< 0.076	< 0.081	< 0.08	< 0.081	< 0.081	< 0.079	< 0.082	< 0.99	< 1	< 0.075
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 3.8	< 3.9	< 0.082	< 0.083	< 0.076	< 0.081	< 0.08	< 0.081	< 0.081	< 0.079	< 0.082	< 0.99	< 1	< 0.075
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 9.4	< 9.8	< 0.21	< 0.21	< 0.19	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.21	< 2.5	< 2.5	< 0.19
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 3.8	< 3.9	< 0.082	< 0.083	< 0.076	< 0.081	< 0.08	< 0.081	< 0.081	< 0.079	< 0.082	< 0.99	< 1	< 0.075
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.75 J	0.27 J	0.033	0.008 J	0.33	0.72	0.01 J	< 0.004	0.096	< 0.004	< 0.004	0.48	1.5	0.12
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.19	< 0.2	< 0.004	< 0.004	0.014 J	0.087	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.049	0.092 J	0.006 J
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.19	< 0.2	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	0.005 J	< 0.004	< 0.004	< 0.049	< 0.05	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 9.4	< 9.8	< 0.21	< 0.21	< 0.19	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.21	< 2.5	< 2.5	< 0.19
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 1.9	< 2	< 0.041	< 0.042	< 0.038	< 0.04	< 0.04	< 0.04	< 0.041	< 0.04	< 0.041	< 0.49	< 0.5	< 0.037
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.73 J	< 0.2	0.018 J	0.006 J	0.18	0.25	0.006 J	< 0.004	< 0.004	< 0.004	< 0.004	0.19 J	0.59	0.042
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
Naphthalene	mg/kg	760	190,000	25	**25**	< 0.19	< 0.2	0.006 J	0.005 J	0.089	0.2	< 0.004	< 0.004	< 0.004	0.87	< 0.004	< 0.049	0.79	0.004 J
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 1.9	< 2	< 0.041	< 0.042	< 0.038	< 0.04	< 0.04	< 0.04	< 0.041	< 0.04	< 0.041	< 0.49	< 0.5	< 0.037
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	0.043	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 1.9	< 2	< 0.041	< 0.042	< 0.038	< 0.04	< 0.04	< 0.04	< 0.041	< 0.04	< 0.041	< 0.49	< 0.5	< 0.037
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.43 J	< 0.2	0.015 J	0.005 J	0.21	0.85	0.005 J	< 0.004	0.074	< 0.004	< 0.004	0.23 J	1.2	0.061
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.94	< 0.98	< 0.021	< 0.021	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.021	< 0.25	< 0.25	< 0.019
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 3.8	< 3.9	< 0.082	< 0.083	< 0.076	< 0.081	< 0.08	< 0.081	< 0.081	< 0.079	< 0.082	< 0.99	< 1	< 0.075
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.88 J	0.24 J	0.034	0.013 J	0.34	0.75	0.011 J	< 0.004	0.095	< 0.004	< 0.004	0.55	1.4	0.12
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	0.003 J	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.009	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.003	< 0.004	< 0.003	< 0.004	< 0.006	< 0.006	< 0.004

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L06-SB05 17-Dec-15 N 0 - 1 ft	ERM-L06-SB06 17-Dec-15 N 0 - 1 ft	ERM-L06-SB06 21-Dec-15 N 9 - 10 ft	ERM-L06-SB06 21-Dec-15 N 13 - 14 ft	ERM-L06-SB08 17-Dec-15 N 0 - 1 ft	ERM-L07-SB01 17-Dec-15 N 0 - 1 ft	ERM-L07-SB01 21-Dec-15 N 11 - 12 ft	ERM-L07-SB01 21-Dec-15 N 22 - 23 ft	ERM-L07-SB02 23-Dec-15 N 0 - 1 ft	ERM-L07-SB02 18-Jan-16 N 6 - 7 ft	ERM-L07-SB02 18-Jan-16 N 10 - 11 ft	ERM-L08-SB01 15-Dec-15 N 0 - 1 ft	ERM-L08-SB02 15-Dec-15 N 0 - 1 ft	ERM-L08-SB02 08-Jan-16 N 7.5 - 8.5 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.007	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.002	< 0.003	< 0.003	< 0.003	< 0.004	< 0.004	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.007	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.002	< 0.003	< 0.003	< 0.003	< 0.004	< 0.004	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.016	< 0.006	< 0.007	0.022	< 0.006	< 0.008	< 0.006	0.006 J	< 0.006	< 0.006	< 0.006	< 0.01	< 0.01	< 0.008
Benzene	mg/kg	290	330	0.13	0.5	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0004	< 0.0005	< 0.0007	< 0.0007	< 0.0006
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.002	< 0.0009	< 0.001	0.004 J	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	0.003 J	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.003	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Ethanol	mg/kg	NS	NS	NS	NS	< 0.22	< 0.092	< 0.1	< 0.1	< 0.092	< 0.11	< 0.09	< 0.08	< 0.091	< 0.084	< 0.092	0.78	1.1	< 0.11
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.003	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.003	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.003	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.003	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.25	< 0.1	< 0.11	< 0.11	< 0.1	< 0.12	< 0.099	< 0.089	< 0.1	< 0.093	< 0.1	< 0.15	< 0.16	< 0.12
Styrene	mg/kg	10,000	10,000	79	24	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.009	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.003	< 0.004	< 0.003	< 0.004	< 0.006	< 0.006	< 0.004
Toluene	mg/kg	10,000	10,000	44	100	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.002	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L09-SB01 16-Dec-15 N 0 - 1 ft	ERM-L09-SB01 08-Jan-16 N 6 - 7 ft	ERM-L09-SB02 15-Dec-15 N 0 - 1 ft	ERM-L09-SB02 08-Jan-16 N 7 - 8 ft	ERM-L09-SB02 08-Jan-16 N 11.5 - 12.5 ft	ERM-L09-SB03 16-Dec-15 N 0 - 1 ft	ERM-L09-SB03 08-Jan-16 N 6 - 7 ft	ERM-L09-SB03 08-Jan-16 N 13 - 14 ft	ERM-L09-SB04 16-Dec-15 N 0 - 1 ft	ERM-L09-SB04 08-Jan-16 N 10 - 11 ft	ERM-L09-SB04 08-Jan-16 N 13 - 14 ft	ERM-L10-SB01 15-Dec-15 N 0 - 1 ft	ERM-L10-SB01 13-Jan-16 N 8 - 9 ft	ERM-L10-SB01 13-Jan-16 N 14 - 15 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS	< 0.25					0.25			0.75					
Asbestos, Amosite	%	NS	NS	NS	NS									< 0.25					
Asbestos	%	NS	NS	NS	NS		None Detected	None Detected	None Detected	None Detected		None Detected	None Detected		None Detected	None Detected	None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.3	< 5.6	< 6.6	< 5.8	< 6.3	< 6.7	< 6.2	< 6.1	< 6.0	< 6.8	< 6.1	< 8.3	< 6.3	< 5.8
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.22	< 0.19	< 0.23	< 0.21	< 0.22	< 0.24	< 0.22	< 0.21	< 0.21	< 0.23	< 0.21	< 0.29	< 0.23	< 0.21
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	10,500	30,700	16,500	15,500	25,200	17,200	31,800	41,600	5,310	32,700	27,000	8,040	23,800	20,000
Antimony	mg/kg	**1,300**	190,000	NS	**27**	6.59	< 0.511	< 0.524	< 0.523	< 0.572	6.25	< 0.633	< 3.07	5.58	< 0.723	< 0.524	< 0.651	< 0.522	< 0.579
Arsenic	mg/kg	**61**	190,000	NS	**29**	28.9	3.14	**29.3**	9.46	5.64	21.2	6.30	1.41 J	18.4	16.0	6.65	17.6	9.06	1.11 J
Barium	mg/kg	190,000	190,000	NS	8,200	391	233	147	124	167	218	71.8	304	303	28.7	117	107	73.0	100
Beryllium	mg/kg	6,400	190,000	NS	320	1.84	1.69	2.83	0.983	1.38	3.13	1.63	3.04	4.92	1.89	1.15	1.07	1.35	1.18
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.0591	0.0956 J	0.139 J	1.57	1.84	0.363 J	0.0657 J	< 0.0556	0.300 J	1.01	0.448 J	0.443 J	0.0628 J	0.136 J
Calcium	mg/kg	NS	NS	NS	NS	9,690	575	2,330	5,250	2,880	2,320	990	1,710	11,400	30,400	8,360	5,080	1,230	959
Chromium	mg/kg	190,000	190,000	NS	190,000	64.3	68.3	36.1	34.3	48.6	47.8	54.4	84.9	46.8	59.4	56.7	21.9	38.6	37.2
Cobalt	mg/kg	960	190,000	NS	160	9.24	16.0	12.3	7.91	9.61	14.3	9.27	31.4	8.95	25.5	13.0	7.08	4.73	11.3
Copper	mg/kg	120,000	190,000	NS	43,000	96.0	63.1	107	67.3	99.2	97.9	26.9	87.3	69.4	40.9	43.1	59.3	26.0	16.8
Iron	mg/kg	190,000	190,000	NS	NS	31,400	38,300	37,600	25,500	36,000	37,000	30,900	54,400	25,100	23,000	19,100	21,100	30,800	14,400
Lead	mg/kg	**1,000**	190,000	NS	**450**	352	6.51	243	110	199	287	16.1	16.0	445	15.3	7.76	220	27.0	7.98
Magnesium	mg/kg	NS	NS	NS	NS	4,810	11,600	3,530	5,170	6,170	5,910	3,200	14,100	4,690	2,380	6,740	2,090	2,480	2,260
Manganese	mg/kg	150,000	190,000	NS	**2,000**	394	333	273	315	300	305	123	**2,120**	222	161	97.4	140	83.2	158
Mercury	mg/kg	510	190,000	NS	**10**	0.675	< 0.0106	3.66	0.352	0.0418 J	4.55	0.0204 J	0.0122 J	**15.7**	0.0616 J	0.0153 J	0.481	< 0.0120	0.0219 J
Nickel	mg/kg	64,000	190,000	NS	650	81.1	40.6	125	27.8	40.7	116	26.7	48.3	246	286	87.3	33.4	16.8	20.7
Potassium	mg/kg	NS	NS	NS	NS	1,720	10,400	2,560	2,410	3,900	4,910	2,150	12,200	1,070	3,290	4,710	1,660	1,350	1,400
Selenium	mg/kg	16,000	190,000	NS	26	8.14	< 3.98	2.37 J	< 4.07	< 4.45	8.78	< 0.985	< 4.77	6.45	< 1.12	< 0.815	2.38 J	< 0.812	< 0.900
Silver	mg/kg	16,000	190,000	NS	84	0.293 J	0.878	0.286 J	< 0.174	0.274 J	0.285 J	< 0.211	1.44	< 0.213	< 0.241	0.314 J	0.484 J	< 0.174	< 0.193
Sodium	mg/kg	NS	NS	NS	NS	210	91.3 J	139	501	295	164	81.3 J	110 J	225	93.2 J	103	104 J	114	168
Thallium	mg/kg	32	190,000	NS	**14**	2.59 J	7.60	< 0.958	3.39	3.30	4.63	3.58	10.8	8.12	1.67 J	4.03	< 1.19	3.20	1.10 J
Vanadium	mg/kg	**220**	190,000	NS	**820**	**258**	91.0	**552**	52.7	56.8	**552**	67.1	136	**1,020**	55.5	62.7	119	74.4	26.0
Zinc	mg/kg	190,000	190,000	NS	12,000	381	107	175	247	191	211	52.2	102	327	810	224	146	47.1	55.6
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.046	< 0.0040	< 0.23	< 0.0084	< 0.0044	< 0.048	< 0.0044	< 0.0044	< 0.043	< 0.0049	< 0.0044	< 0.3	< 0.0044	< 0.0042
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.058	< 0.0051	< 0.3	< 0.011	< 0.0057	< 0.061	< 0.0056	< 0.0056	< 0.055	< 0.0062	< 0.0056	< 0.38	< 0.0057	< 0.0053
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.1	< 0.0088	< 0.52	< 0.019	< 0.0099	< 0.11	< 0.0097	< 0.0097	< 0.096	< 0.011	< 0.0098	< 0.66	< 0.0099	< 0.0092
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.042	< 0.0036	< 0.21	< 0.0077	< 0.0041	< 0.044	< 0.0040	< 0.0040	< 0.04	< 0.0044	< 0.0040	< 0.27	< 0.0041	< 0.0038
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.042	< 0.0036	< 0.21	< 0.0077	< 0.0041	< 0.044	< 0.0040	< 0.0040	< 0.04	< 0.0044	< 0.0040	< 0.27	< 0.0041	< 0.0038
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.042	< 0.0036	< 0.21	< 0.0077	< 0.0041	< 0.044	< 0.0040	< 0.0040	< 0.04	< 0.0044	< 0.0040	< 0.27	< 0.0041	< 0.0038
Aroclor 1260	mg/kg	**46**	190,000	NS	770	1.9	< 0.0054	3.1	< 0.011	< 0.0060	2	< 0.0060	< 0.0059	2.6	< 0.0066	0.014 J	9.1	0.19	< 0.0057
Total PCBs	mg/kg	NS	NS	NS	NS	1.9	< 0.0036	3.1	< 0.0077	< 0.0041	2	< 0.0040	< 0.0040	2.6	< 0.0044	0.014 J	9.1	0.19	< 0.0038
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 3.7	< 0.33	< 3.9	< 1.7	< 1.9	< 4	< 0.37	< 0.36	< 3.6	< 0.4	< 0.37	< 4.9	< 0.38	< 0.35
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.83	< 0.073	< 0.87	< 0.38	< 0.41	< 0.88	< 0.081	< 0.081	< 0.8	< 0.09	< 0.081	< 1.1	< 0.083	< 0.077
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.083	< 0.007	< 0.087	< 0.038	< 0.041	< 0.088	< 0.008	< 0.008	< 0.08	< 0.009	< 0.008	< 0.11	< 0.008	< 0.008
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L09-SB01 16-Dec-15 N 0 - 1 ft	ERM-L09-SB01 08-Jan-16 N 6 - 7 ft	ERM-L09-SB02 15-Dec-15 N 0 - 1 ft	ERM-L09-SB02 08-Jan-16 N 7 - 8 ft	ERM-L09-SB02 08-Jan-16 N 11.5 - 12.5 ft	ERM-L09-SB03 16-Dec-15 N 0 - 1 ft	ERM-L09-SB03 08-Jan-16 N 6 - 7 ft	ERM-L09-SB03 08-Jan-16 N 13 - 14 ft	ERM-L09-SB04 16-Dec-15 N 0 - 1 ft	ERM-L09-SB04 08-Jan-16 N 10 - 11 ft	ERM-L09-SB04 08-Jan-16 N 13 - 14 ft	ERM-L10-SB01 15-Dec-15 N 0 - 1 ft	ERM-L10-SB01 13-Jan-16 N 8 - 9 ft	ERM-L10-SB01 13-Jan-16 N 14 - 15 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	0.29	< 0.004	1.2	2	0.081 J	1.3	0.027	0.063	0.95	0.038	< 0.004	0.21 J	0.021 J	< 0.004
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 1.2	< 0.11	< 1.3	< 0.57	< 0.62	< 1.3	< 0.12	< 0.12	< 1.2	< 0.13	< 0.12	< 1.6	< 0.13	< 0.12
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.83	< 0.073	< 0.87	< 0.38	< 0.41	< 0.88	< 0.081	< 0.081	< 0.8	< 0.09	< 0.081	< 1.1	< 0.083	< 0.077
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 2.1	< 0.18	< 2.2	< 0.96	< 1	< 2.2	< 0.2	< 0.2	< 2	< 0.22	< 0.2	< 2.7	< 0.21	< 0.19
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	0.05 J	< 0.004	0.13 J	3.5	0.14	0.11 J	0.058	0.036	0.13 J	0.016 J	< 0.004	1.3	0.008 J	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.042	< 0.004	0.14 J	2.1	0.17	0.073 J	0.019 J	< 0.004	0.12 J	< 0.004	< 0.004	0.22 J	< 0.004	< 0.004
Anthracene	mg/kg	190,000	190,000	NS	350	0.25	< 0.004	0.28	8.3	0.35	0.22 J	0.15	0.06	0.24	0.028	0.005 J	3.9	0.026	< 0.004
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	1.4	0.007 J	0.76	15	0.74	0.47	0.099	0.029	0.98	0.04	0.012 J	20	0.074	< 0.004
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	1.2	0.007 J	0.86	13	0.77	0.6	0.07	0.028	0.86	0.017 J	0.013 J	**13**	0.074	< 0.004
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	1.9	0.009 J	0.91	18	1.1	0.75	0.074	0.02 J	1.3	0.021 J	0.016 J	12	0.1	< 0.004
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.8	0.004 J	1	7.3	0.45	0.72	0.044	0.027	0.64	< 0.004	0.011 J	5.7	0.058	< 0.004
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.71	0.006 J	0.37	6.8	0.34	0.31	0.031	0.009 J	0.51	0.013 J	0.009 J	5.5	0.049	< 0.004
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.83	< 0.073	< 0.87	< 0.38	< 0.41	< 0.88	< 0.081	< 0.081	< 0.8	< 0.09	< 0.081	< 1.1	< 0.083	< 0.077
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.83	< 0.073	< 0.87	< 0.38	< 0.41	< 0.88	< 0.081	< 0.081	< 0.8	< 0.09	< 0.081	< 1.1	0.091 J	< 0.077
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.21	< 0.018	< 0.22	2.3	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
Chrysene	mg/kg	760	190,000	NS	230	1.6	0.008 J	1.4	12	0.71	1	0.13	0.062	1.2	0.079	0.023	19	0.097	< 0.004
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.26	0.006 J	0.27	2.2	0.16	0.14 J	0.02 J	0.014 J	0.2 J	< 0.004	0.007 J	2	0.013 J	< 0.004
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.21	< 0.018	< 0.22	3.6	0.12 J	< 0.22	0.08	0.071	0.33 J	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.83	< 0.073	< 0.87	< 0.38	< 0.41	< 0.88	< 0.081	< 0.081	< 0.8	< 0.09	< 0.081	< 1.1	< 0.083	< 0.077
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.83	< 0.073	< 0.87	< 0.38	< 0.41	< 0.88	< 0.081	< 0.081	< 0.8	< 0.09	< 0.081	< 1.1	< 0.083	< 0.077
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.83	< 0.073	< 0.87	< 0.38	< 0.41	< 0.88	< 0.081	< 0.081	< 0.8	< 0.09	< 0.081	< 1.1	< 0.083	< 0.077
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 2.1	< 0.18	< 2.2	< 0.96	< 1	< 2.2	< 0.2	< 0.2	< 2	< 0.22	< 0.2	< 2.7	< 0.21	< 0.19
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.83	< 0.073	< 0.87	< 0.38	< 0.41	< 0.88	< 0.081	< 0.081	< 0.8	< 0.09	< 0.081	< 1.1	< 0.083	< 0.077
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	2.1	0.006 J	1	34	1.5	0.76	0.35	0.054	1.6	0.075	0.016 J	20	0.14	< 0.004
Fluorene	mg/kg	130,000	190,000	NS	3,800	0.05 J	< 0.004	0.14 J	5.3	0.21	0.12 J	0.12	0.08	0.12 J	0.025	< 0.004	0.66	0.01 J	< 0.004
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.042	< 0.004	< 0.044	< 0.019	< 0.021	< 0.044	< 0.004	< 0.004	< 0.04	< 0.004	< 0.004	< 0.055	< 0.004	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 2.1	< 0.18	< 2.2	< 0.96	< 1	< 2.2	< 0.2	< 0.2	< 2	< 0.22	< 0.2	< 2.7	< 0.21	< 0.19
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.42	< 0.037	< 0.44	< 0.19	< 0.21	< 0.44	< 0.041	< 0.04	< 0.4	< 0.045	< 0.041	< 0.55	< 0.042	< 0.038
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.71	0.005 J	0.56	7.5	0.45	0.38	0.036	0.011 J	0.59	< 0.004	0.01 J	4.5	0.053	< 0.004
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
Naphthalene	mg/kg	760	190,000	25	**25**	0.23	< 0.004	0.5	3.3	0.14	0.49	0.036	0.06	1.1	0.045	0.005 J	0.16 J	0.022	< 0.004
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.42	< 0.037	< 0.44	< 0.19	< 0.21	< 0.44	< 0.041	< 0.04	< 0.4	< 0.045	< 0.041	< 0.55	< 0.042	< 0.038
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.21	< 0.018	< 0.22	0.12 J	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	0.16	< 0.02	< 0.27	< 0.021	< 0.019
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.42	< 0.037	< 0.44	< 0.19	< 0.21	< 0.44	< 0.041	< 0.04	< 0.4	< 0.045	< 0.041	< 0.55	< 0.042	< 0.038
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	1.2	< 0.004	1.4	33	1.3	1.3	0.43	0.13	1.2	0.032	0.007 J	12	0.12	< 0.004
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.21	< 0.018	< 0.22	< 0.096	< 0.1	< 0.22	< 0.02	< 0.02	< 0.2	< 0.022	< 0.02	< 0.27	< 0.021	< 0.019
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.83	< 0.073	< 0.87	< 0.38	< 0.41	< 0.88	< 0.081	< 0.081	< 0.8	< 0.09	< 0.081	< 1.1	< 0.083	< 0.077
Pyrene	mg/kg	96,000	190,000	NS	2,200	2.4	0.007 J	1.4	26	1.3	1.1	0.36	0.099	1.4	0.07	0.02 J	37	0.14	< 0.004
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.004	< 0.004	< 0.004	< 0.004	0.018	< 0.004	0.009 J	< 0.004	< 0.004	< 0.006	< 0.004	< 0.008	0.004 J	< 0.003

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L09-SB01 16-Dec-15 N 0 - 1 ft	ERM-L09-SB01 08-Jan-16 N 6 - 7 ft	ERM-L09-SB02 15-Dec-15 N 0 - 1 ft	ERM-L09-SB02 08-Jan-16 N 7 - 8 ft	ERM-L09-SB02 08-Jan-16 N 11.5 - 12.5 ft	ERM-L09-SB03 16-Dec-15 N 0 - 1 ft	ERM-L09-SB03 08-Jan-16 N 6 - 7 ft	ERM-L09-SB03 08-Jan-16 N 13 - 14 ft	ERM-L09-SB04 16-Dec-15 N 0 - 1 ft	ERM-L09-SB04 08-Jan-16 N 10 - 11 ft	ERM-L09-SB04 08-Jan-16 N 13 - 14 ft	ERM-L10-SB01 15-Dec-15 N 0 - 1 ft	ERM-L10-SB01 13-Jan-16 N 8 - 9 ft	ERM-L10-SB01 13-Jan-16 N 14 - 15 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.006	< 0.003	< 0.002
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.006	< 0.003	< 0.002
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.008	< 0.007	< 0.008	< 0.007	0.11	< 0.008	0.097	0.025	< 0.008	0.019 J	0.02	< 0.014	0.04	< 0.006
Benzene	mg/kg	290	330	0.13	0.5	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0007	< 0.0006	< 0.0005	< 0.0006	< 0.0005	< 0.0007	< 0.0005	< 0.001	< 0.0005	< 0.0004
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	< 0.001	< 0.001	< 0.001	0.005 J	< 0.001	< 0.001	0.004 J	< 0.001	0.007	0.007	< 0.002	0.002 J	< 0.0008
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.004	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Ethanol	mg/kg	NS	NS	NS	NS	< 0.11	< 0.1	0.14 J	< 0.11	< 0.14	1.1	< 0.099	< 0.11	< 0.11	< 0.14	< 0.091	0.48 J	< 0.098	< 0.083
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.004	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.004	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.004	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.004	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.12	< 0.11	< 0.12	< 0.12	< 0.15	< 0.12	< 0.11	< 0.12	< 0.12	< 0.16	< 0.1	< 0.22	< 0.11	< 0.091
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.006	< 0.004	< 0.004	< 0.004	< 0.004	< 0.006	< 0.004	< 0.008	< 0.004	< 0.003
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L10-SB02 15-Dec-15 N 0 - 1 ft	ERM-L10-SB02 08-Jan-16 N 7 - 8 ft	ERM-L10-SB02 08-Jan-16 N 13 - 14 ft	ERM-L10-SB03 15-Dec-15 N 0 - 1 ft	ERM-L10-SB03 08-Jan-16 N 10 - 11 ft	ERM-L10-SB04 16-Dec-15 N 0 - 1 ft	ERM-L10-SB04 13-Jan-16 N 5 - 10 ft	ERM-L11-SB01 22-Dec-15 N 0 - 1 ft	ERM-L11-SB01 19-Jan-16 N 8 - 9 ft	ERM-L11-SB01 19-Jan-16 N 11 - 12 ft	ERM-L11-SB02 16-Dec-15 N 0 - 1 ft	ERM-L11-SB02 08-Jan-16 N 7 - 8 ft	ERM-L11-SB02 08-Jan-16 N 13 - 14 ft	ERM-L11-SB03 22-Dec-15 N 0 - 1 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS							0.25							
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected		None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.6	< 6.4	< 6.5	< 7.0	< 6.6	< 7.0	< 5.9	< 6.3	< 6.2	< 6.2	< 6.3	< 6.2	< 5.7	< 6.2
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.24	< 0.22	< 0.24	< 0.25	< 0.23	< 0.25	< 0.21	< 0.22	< 0.22	< 0.22	< 0.23	< 0.21	< 0.20	< 0.22
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	8,540	8,620	12,500	9,220	21,900	11,900	11,700	14,800	12,500	15,000	6,740	16,500	13,600	4,630
Antimony	mg/kg	**1,300**	190,000	NS	**27**	< 5.33	< 3.22	< 2.89	< 5.55	< 0.590	4.35	**94.4**	< 0.610	< 0.655	< 0.652	14.5	< 0.633	< 3.03	4.68
Arsenic	mg/kg	**61**	190,000	NS	**29**	16.2	4.16	28.4	8.21 J	11.2	7.32	9.30	12.9	5.67	3.41	**89.7**	6.22	3.41	**60.1**
Barium	mg/kg	190,000	190,000	NS	8,200	226	54.7	210	249	163	119	512	120	65.6	65.2	138	64.9	30.8	306
Beryllium	mg/kg	6,400	190,000	NS	320	7.53	0.527 J	1.37	5.23	1.26	1.34	2.39	0.985	0.932	0.663	0.841	0.888	1.19	0.824
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.280	< 0.292	1.67	0.846 J	2.41	< 0.0657	4.37	0.139 J	< 0.0594	< 0.0592	< 0.0617	0.125 J	< 0.275	0.262 J
Calcium	mg/kg	NS	NS	NS	NS	3,340	11,100	1,480	6,470	2,330	3,880	28,400	2,650	602	361	2,420	1,180	136	1,470
Chromium	mg/kg	190,000	190,000	NS	190,000	48.8	32.4	32.8	57.2	52.2	31.3	35.8	39.2	30.0	31.4	21.6	24.8	33.8	19.3
Cobalt	mg/kg	960	190,000	NS	160	18.7	1.31	8.38	15.6	11.2	7.51	6.38	10.4	4.26	8.30	6.94	6.51	4.68	4.36
Copper	mg/kg	120,000	190,000	NS	43,000	244	89.4	2,350	183	105	40.7	86.1	82.4	22.6	18.8	86.8	19.1	19.8	263
Iron	mg/kg	190,000	190,000	NS	NS	142,000	79,000	35,600	109,000	37,000	22,800	21,900	30,500	23,400	13,900	30,600	18,300	78,300	44,900
Lead	mg/kg	**1,000**	190,000	NS	**450**	**541**	33.9	300	**540**	164	165	**3,690**	187	8.95	7.89	**1,420**	43.4	7.45	**1,360**
Magnesium	mg/kg	NS	NS	NS	NS	1,920	1,060	1,420	3,690	6,370	2,890	5,340	2,620	2,550	2,480	1,860	2,070	1,240	717
Manganese	mg/kg	150,000	190,000	NS	**2,000**	250	39.8	64.1	444	280	234	316	319	159	133	177	127	253	101
Mercury	mg/kg	510	190,000	NS	**10**	1.52	0.0208 J	0.310	2.95	0.148	0.399	1.25	1.96	< 0.0119	< 0.0121	0.517	0.0179 J	0.0156 J	0.581
Nickel	mg/kg	64,000	190,000	NS	650	343	7.86	118	246	42.2	30.9	63.3	34.8	12.2	21.5	26.4	12.9	10.5	80.7
Potassium	mg/kg	NS	NS	NS	NS	1,300	1,960	1,070	2,460	4,130	2,050	1,930	1,410	1,180	1,260	1,100	1,170	1,150	967
Selenium	mg/kg	16,000	190,000	NS	26	10.3 J	< 5.01	< 0.900	6.60 J	5.58 J	4.43	< 0.978	2.25 J	< 1.02	< 1.01	8.31	< 0.984	< 4.71	9.98 J
Silver	mg/kg	16,000	190,000	NS	84	2.02 J	< 0.215	0.230 J	1.35 J	0.293 J	< 0.241	0.737	0.357 J	< 0.218	< 0.217	< 0.227	< 0.211	< 0.202	0.919
Sodium	mg/kg	NS	NS	NS	NS	852	385	558	340	1,520	77.3 J	355	77.9 J	69.4 J	40.3 J	100 J	95.3 J	41.3 J	397
Thallium	mg/kg	32	190,000	NS	**14**	< 4.88	4.08	7.09	< 5.08	4.10	< 1.01	**14.2**	< 4.23	2.45 J	2.11 J	< 0.945	1.62 J	2.64 J	< 4.42
Vanadium	mg/kg	**220**	190,000	NS	**820**	**1,680**	61.4	226	**1,140**	63.7	156	**454**	48.0	38.5	39.1	66.2	35.0	34.0	76.3
Zinc	mg/kg	190,000	190,000	NS	12,000	345	31.1	212	489	255	186	524	264	44.2	59.6	159	48.9	24.5	660
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.23	< 0.0045	< 0.024	< 0.25	< 0.0047	< 0.25	< 4.2	< 0.023	< 0.0044	< 0.0045	< 0.023	< 0.0044	< 0.0040	< 0.022
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.3	< 0.0058	< 0.03	< 0.32	< 0.0060	< 0.32	< 5.3	< 0.029	< 0.0057	< 0.0057	< 0.029	< 0.0056	< 0.0052	< 0.028
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.52	< 0.01	< 0.052	< 0.56	< 0.011	< 0.56	< 9.3	< 0.05	< 0.0099	< 0.0099	< 0.05	< 0.0098	< 0.0090	< 0.049
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.21	< 0.0041	< 0.022	< 0.23	< 0.0043	< 0.23	< 3.8	< 0.021	< 0.0041	< 0.0041	< 0.021	< 0.0040	< 0.0037	< 0.02
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.21	< 0.0041	< 0.022	< 0.23	< 0.0043	< 0.23	< 3.8	< 0.021	< 0.0041	< 0.0041	< 0.021	< 0.0040	< 0.0037	< 0.02
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.21	< 0.0041	< 0.022	< 0.23	< 0.0043	< 0.23	< 3.8	< 0.021	< 0.0041	< 0.0041	0.65	< 0.0040	< 0.0037	1.4
Aroclor 1260	mg/kg	**46**	190,000	NS	770	9.1	< 0.0062	< 0.032	7.7	< 0.0064	11	11 J	0.91	< 0.0060	< 0.0061	0.49	< 0.0060	< 0.0055	< 0.03
Total PCBs	mg/kg	NS	NS	NS	NS	9.1	< 0.0041	< 0.022	7.7	< 0.0043	11	11 J	0.91	< 0.0041	< 0.0041	1.1	< 0.0040	< 0.0037	1.4
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.22	< 0.021	0.032 J	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 3.9	< 0.38	< 0.39	< 4.2	< 0.39	< 4.1	< 8.8	< 19	< 0.37	< 0.37	< 3.8	< 0.36	< 0.34	< 19
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.87	< 0.085	< 0.086	< 0.93	< 0.087	< 0.92	< 1.9	< 4.2	< 0.082	< 0.083	< 0.84	< 0.081	< 0.075	< 4.1
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.087	< 0.008	< 0.009	< 0.093	< 0.009	< 0.092	< 0.19	< 0.42	< 0.008	< 0.008	< 0.084	< 0.008	< 0.007	< 0.41
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L10-SB02 15-Dec-15 N 0 - 1 ft	ERM-L10-SB02 08-Jan-16 N 7 - 8 ft	ERM-L10-SB02 08-Jan-16 N 13 - 14 ft	ERM-L10-SB03 15-Dec-15 N 0 - 1 ft	ERM-L10-SB03 08-Jan-16 N 10 - 11 ft	ERM-L10-SB04 16-Dec-15 N 0 - 1 ft	ERM-L10-SB04 13-Jan-16 N 5 - 10 ft	ERM-L11-SB01 22-Dec-15 N 0 - 1 ft	ERM-L11-SB01 19-Jan-16 N 8 - 9 ft	ERM-L11-SB01 19-Jan-16 N 11 - 12 ft	ERM-L11-SB02 16-Dec-15 N 0 - 1 ft	ERM-L11-SB02 08-Jan-16 N 7 - 8 ft	ERM-L11-SB02 08-Jan-16 N 13 - 14 ft	ERM-L11-SB03 22-Dec-15 N 0 - 1 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	1.1	< 0.004	0.59	2	0.28	0.048 J	0.37 J	< 0.21	< 0.004	< 0.004	1.8	0.056	< 0.004	6.4
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 1.3	< 0.13	< 0.13	< 1.4	< 0.13	< 1.4	< 2.9	< 6.3	< 0.12	< 0.12	< 1.3	< 0.12	< 0.11	< 6.2
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.87	< 0.085	< 0.086	< 0.93	< 0.087	< 0.92	< 1.9	< 4.2	< 0.082	< 0.083	< 0.84	< 0.081	< 0.075	< 4.1
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 2.2	< 0.21	< 0.22	< 2.3	< 0.22	< 2.3	< 4.9	< 10	< 0.21	< 0.21	< 2.1	< 0.2	< 0.19	< 10
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	0.083 J	< 0.004	0.39	0.15 J	0.008 J	0.046 J	1.7	0.25 J	< 0.004	< 0.004	0.33	0.006 J	< 0.004	< 0.21
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	0.14 J	< 0.004	0.6	0.48	0.01 J	< 0.046	0.23 J	< 0.21	< 0.004	< 0.004	0.18 J	0.011 J	< 0.004	0.24 J
Anthracene	mg/kg	190,000	190,000	NS	350	0.18 J	0.009 J	3.1	0.82	0.021 J	0.11 J	5	0.56 J	< 0.004	< 0.004	0.73	0.015 J	< 0.004	0.35 J
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.33	0.023	7.3	1.4	0.049	0.53	12	1.7	< 0.004	0.005 J	2.2	0.027	< 0.004	1.1
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.34	0.024	4.5	1.1	0.05	0.58	11	1.6	< 0.004	0.7	1.6	0.018 J	0.004 J	0.8 J
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.61	0.03	7.1	2.3	0.1	0.76	14	2.1	< 0.004	0.005 J	2.3	0.035	0.005 J	1.8
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.3	0.016 J	2.3	0.74	0.045	0.39	8.4	1.1	< 0.004	0.008 J	0.84	0.016 J	0.009 J	0.7 J
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.29	0.016 J	2.2	0.95	0.029	0.32	7.5	0.72 J	< 0.004	0.005 J	1	0.009 J	< 0.004	0.59 J
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.87	< 0.085	< 0.086	< 0.93	< 0.087	< 0.92	< 1.9	< 4.2	< 0.082	< 0.083	< 0.84	< 0.081	< 0.075	< 4.1
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.87	< 0.085	< 0.086	< 0.93	< 0.087	< 0.92	< 1.9	< 4.2	< 0.082	< 0.083	< 0.84	< 0.081	< 0.075	< 4.1
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.22	< 0.021	0.54	< 0.23	< 0.022	< 0.23	2.1	< 1	< 0.021	< 0.021	0.36 J	< 0.02	< 0.019	< 1
Chrysene	mg/kg	760	190,000	NS	230	0.65	0.026	6.7	2.1	0.14	0.57	12	1.7	< 0.004	0.005 J	2.8	0.038	< 0.004	2.7
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.11 J	0.007 J	0.31	0.32	0.021 J	0.091 J	1.9	0.41 J	< 0.004	< 0.004	0.28	0.006 J	< 0.004	0.42 J
Dibenzofuran	mg/kg	3,200	190,000	NS	310	0.33 J	< 0.021	0.74	0.68	< 0.022	< 0.23	1.1	< 1	< 0.021	< 0.021	0.6	< 0.02	< 0.019	1.6 J
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.87	< 0.085	< 0.086	1.5 J	< 0.087	< 0.92	< 1.9	< 4.2	< 0.082	< 0.083	< 0.84	< 0.081	0.095 J	< 4.1
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.87	< 0.085	< 0.086	< 0.93	< 0.087	< 0.92	< 1.9	< 4.2	< 0.082	< 0.083	< 0.84	< 0.081	< 0.075	< 4.1
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.87	< 0.085	< 0.086	< 0.93	< 0.087	< 0.92	< 1.9	< 4.2	< 0.082	< 0.083	< 0.84	< 0.081	< 0.075	< 4.1
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 2.2	< 0.21	< 0.22	< 2.3	< 0.22	< 2.3	< 4.9	< 10	< 0.21	< 0.21	< 2.1	< 0.2	< 0.19	< 10
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.87	< 0.085	< 0.086	< 0.93	< 0.087	< 0.92	< 1.9	< 4.2	< 0.082	< 0.083	< 0.84	< 0.081	< 0.075	< 4.1
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.58	0.043	14	1.8	0.095	0.87	26	3.4	< 0.004	< 0.004	4.1	0.063	< 0.004	1.2
Fluorene	mg/kg	130,000	190,000	NS	3,800	0.066 J	0.006 J	0.81	0.12 J	0.01 J	< 0.046	1.6	< 0.21	< 0.004	< 0.004	0.31	0.021	< 0.004	< 0.21
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.043	< 0.004	< 0.004	< 0.046	< 0.004	< 0.046	< 0.097	< 0.21	< 0.004	< 0.004	< 0.042	< 0.004	< 0.004	< 0.21
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 2.2	< 0.21	< 0.22	< 2.3	< 0.22	< 2.3	< 4.9	< 10	< 0.21	< 0.21	< 2.1	< 0.2	< 0.19	< 10
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.44	< 0.042	< 0.043	< 0.46	< 0.044	< 0.46	< 0.97	< 2.1	< 0.041	< 0.041	< 0.42	< 0.04	< 0.037	< 2.1
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.27	0.014 J	2.4	0.79	0.039	0.34	7.4	1 J	< 0.004	< 0.004	0.84	0.016 J	0.004 J	0.46 J
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
Naphthalene	mg/kg	760	190,000	25	**25**	0.72	0.007 J	1	1.5	0.068	0.066 J	1	< 0.21	< 0.004	< 0.004	1.4	0.076	< 0.004	4.5
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.22	< 0.021	0.047	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.44	< 0.042	< 0.043	< 0.46	< 0.044	< 0.46	< 0.97	< 2.1	< 0.041	< 0.041	< 0.42	< 0.04	< 0.037	< 2.1
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.22	< 0.021	0.25	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.44	< 0.042	< 0.043	< 0.46	< 0.044	< 0.46	< 0.97	< 2.1	< 0.041	< 0.041	< 0.42	< 0.04	< 0.037	< 2.1
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.88	0.035	8.3	1.9	0.098	0.5	19	2.2	< 0.004	< 0.004	3.9	0.086	< 0.004	3.7
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.22	< 0.021	< 0.022	< 0.23	< 0.022	< 0.23	< 0.49	< 1	< 0.021	< 0.021	< 0.21	< 0.02	< 0.019	< 1
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.87	< 0.085	< 0.086	< 0.93	< 0.087	< 0.92	< 1.9	< 4.2	< 0.082	< 0.083	< 0.84	< 0.081	< 0.075	< 4.1
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.62	0.037	11	2	0.092	0.89	24	3	< 0.004	< 0.004	3.4	0.049	< 0.004	1.5
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.001	< 0.001	0.001 J	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	0.006 J	< 0.001	< 0.001	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.005	< 0.004	0.006 J	< 0.006	< 0.004	< 0.005	< 0.008	< 0.004	< 0.004	0.005 J	< 0.005	0.047	< 0.004	< 0.004

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L10-SB02 15-Dec-15 N 0 - 1 ft	ERM-L10-SB02 08-Jan-16 N 7 - 8 ft	ERM-L10-SB02 08-Jan-16 N 13 - 14 ft	ERM-L10-SB03 15-Dec-15 N 0 - 1 ft	ERM-L10-SB03 08-Jan-16 N 10 - 11 ft	ERM-L10-SB04 16-Dec-15 N 0 - 1 ft	ERM-L10-SB04 13-Jan-16 N 5 - 10 ft	ERM-L11-SB01 22-Dec-15 N 0 - 1 ft	ERM-L11-SB01 19-Jan-16 N 8 - 9 ft	ERM-L11-SB01 19-Jan-16 N 11 - 12 ft	ERM-L11-SB02 16-Dec-15 N 0 - 1 ft	ERM-L11-SB02 08-Jan-16 N 7 - 8 ft	ERM-L11-SB02 08-Jan-16 N 13 - 14 ft	ERM-L11-SB03 22-Dec-15 N 0 - 1 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.004	< 0.003	< 0.003	< 0.004	< 0.003	< 0.004	< 0.006	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.004	< 0.003	< 0.003	< 0.004	< 0.003	< 0.004	< 0.006	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.009	< 0.007	0.035	< 0.01	< 0.007	< 0.009	0.026 J	< 0.007	< 0.007	0.028	0.01 J	0.21	0.011 J	< 0.007
Benzene	mg/kg	290	330	0.13	0.5	< 0.0007	< 0.0005	< 0.0005	< 0.0007	< 0.0005	< 0.0007	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	< 0.001	0.005 J	< 0.001	< 0.001	< 0.001	0.006 J	< 0.001	< 0.0009	0.001 J	< 0.001	0.002 J	< 0.001	< 0.001
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.003	< 0.004	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.001	< 0.001	0.001 J	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/kg	NS	NS	NS	NS	< 0.13	< 0.1	< 0.1	0.26 J	< 0.1	< 0.14	< 0.19	< 0.095	< 0.094	< 0.095	< 0.13	< 0.1	< 0.097	< 0.11
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.003	< 0.004	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.003	< 0.004	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.003	< 0.004	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.003	< 0.004	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.15	< 0.11	< 0.11	< 0.16	< 0.11	< 0.15	< 0.21	< 0.11	< 0.1	< 0.1	< 0.14	< 0.11	< 0.11	< 0.12
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.005	< 0.004	< 0.004	< 0.006	< 0.004	< 0.005	< 0.008	< 0.004	< 0.004	< 0.004	< 0.005	< 0.004	< 0.004	< 0.004
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L11-SB03 08-Jan-16 N 8 - 9 ft	ERM-L11-SB03 08-Jan-16 N 12.5 - 13.5 ft	ERM-L11-SB03 13-Jan-16 N 8 - 9 ft	ERM-L11-SB03 13-Jan-16 N 12.5 - 13.5 ft	ERM-L11-SB04 22-Dec-15 N 0 - 1 ft	ERM-L11-SB04 08-Jan-16 N 8 - 9 ft	ERM-L11-SB04 08-Jan-16 N 13.5 - 14.5 ft	ERM-L11-SB04 13-Jan-16 N 8 - 9 ft	ERM-L11-SB04 13-Jan-16 N 13.5 - 14.5 ft	ERM-L12-SB01 22-Dec-15 N 0 - 1 ft	ERM-L12-SB01 19-Jan-16 N 5.5 - 6.5 ft	ERM-L12-SB01 19-Jan-16 N 9 - 10 ft	ERM-L12-SB02 22-Dec-15 N 0 - 1 ft	ERM-L12-SB02 18-Jan-16 N 6 - 7 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS														
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected			None Detected	None Detected	None Detected			None Detected	None Detected	None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.4	< 6.3	< 5.6	< 6.1	< 6.5	< 6.3	< 6.0	< 6.4	< 6.4	< 5.9	< 6.4	< 5.9	< 6.0	< 6.8
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.23	< 0.22			< 0.23	< 0.22	< 0.22			< 0.21	< 0.22	< 0.21	< 0.21	< 0.23
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	1,570	33,800			2,850	2,570	41,000			9,980	15,400	11,700	17,600	19,700
Antimony	mg/kg	**1,300**	190,000	NS	**27**	7.22	< 2.62			6.76 J	< 0.601	< 2.89			< 0.509	< 0.673	< 0.630	< 0.569	< 0.580
Arsenic	mg/kg	**61**	190,000	NS	**29**	24.1	6.03			9.09 J	**66.6**	4.41			16.9	5.63	6.67	13.2	2.02 J
Barium	mg/kg	190,000	190,000	NS	8,200	41.6	237			108	63.4	552			134	60.9	50.2	119	60.7
Beryllium	mg/kg	6,400	190,000	NS	320	0.693	1.83			< 0.625	0.392 J	1.29			0.765	0.803	1.01	1.12	0.753
Cadmium	mg/kg	1,600	190,000	NS	38	2.93	0.636 J			< 0.278	0.0846 J	< 0.262			< 0.0462	< 0.0610	0.159 J	1.09	0.942
Calcium	mg/kg	NS	NS	NS	NS	681	411			260	113	390			2,020	411	1,410	9,480	12,100
Chromium	mg/kg	190,000	190,000	NS	190,000	6.24	78.6			12.7	8.57	95.8			21.3	30.1	29.4	44.3	65.1
Cobalt	mg/kg	960	190,000	NS	160	1.71	16.9			5.36	2.39	17.0			8.14	5.44	5.21	10.7	11.6
Copper	mg/kg	120,000	190,000	NS	43,000	127	148			28.8	21.1	71.3			66.1	21.8	23.3	264	26.7
Iron	mg/kg	190,000	190,000	NS	NS	22,600	57,900			79,800	24,500	61,100			23,100	21,100	20,300	26,100	26,500
Lead	mg/kg	**1,000**	190,000	NS	**450**	88.1	126			34.5	31.3	9.86			117	9.44	7.41	201	11.6
Magnesium	mg/kg	NS	NS	NS	NS	155	12,200			133	301	13,700			2,600	2,700	2,730	4,360	7,360
Manganese	mg/kg	150,000	190,000	NS	**2,000**	13.9	207			27.9	14.8	255			193	190	215	301	482
Mercury	mg/kg	510	190,000	NS	**10**	0.148	0.0376 J			2.45	0.0784 J	< 0.0115			0.391	0.0648 J	< 0.0116	2.39	< 0.0131
Nickel	mg/kg	64,000	190,000	NS	650	80.9	61.5			12.9	6.31	44.2			23.1	11.8	16.3	40.0	59.8
Potassium	mg/kg	NS	NS	NS	NS	259	7,140			1,550	881	12,600			1,730	1,430	1,370	1,120	1,510
Selenium	mg/kg	16,000	190,000	NS	26	< 1.02	< 4.08			6.63 J	1.19 J	< 4.49			< 0.792	< 1.05	< 0.979	1.45 J	< 0.902
Silver	mg/kg	16,000	190,000	NS	84	< 0.218	0.644			< 1.02	< 0.200	0.964			0.284 J	< 0.224	< 0.210	0.260 J	< 0.193
Sodium	mg/kg	NS	NS	NS	NS	237	199			394	478	454			146	37.7 J	64.1 J	98.8 J	64.3 J
Thallium	mg/kg	32	190,000	NS	**14**	1.46 J	6.90			< 4.26	4.67	9.63			< 3.53	2.36 J	2.63 J	< 7.91	< 0.805
Vanadium	mg/kg	**220**	190,000	NS	**820**	13.0	101			59.2	56.3	124			39.4	37.0	45.6	49.1	51.0
Zinc	mg/kg	190,000	190,000	NS	12,000	644	306			7.17 J	9.18	80.6			224	66.0	296	1,680	1,590
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0046	< 0.0045			< 0.0047	< 0.0045	< 0.0043			< 0.021	< 0.0045	< 0.0043	< 0.085	< 0.0048
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0059	< 0.0057			< 0.0060	< 0.0058	< 0.0055			< 0.027	< 0.0058	< 0.0054	< 0.11	< 0.0062
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.01	< 0.0099			< 0.01	< 0.01	< 0.0096			< 0.047	< 0.01	< 0.0095	< 0.19	< 0.011
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0042	< 0.0041			< 0.0043	< 0.0041	< 0.0039			< 0.019	< 0.0042	< 0.0039	< 0.078	< 0.0044
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0042	< 0.0041			< 0.0043	< 0.0041	< 0.0039			< 0.019	< 0.0042	< 0.0039	< 0.078	< 0.0044
Aroclor 1254	mg/kg	46	10,000	NS	340	0.023	0.0085 J			0.016 J	< 0.0041	< 0.0039			< 0.019	< 0.0042	< 0.0039	< 0.078	< 0.0044
Aroclor 1260	mg/kg	**46**	190,000	NS	770	< 0.0062	< 0.0061			< 0.0064	0.32	< 0.0059			0.65	< 0.0062	< 0.0058	2.4	< 0.0066
Total PCBs	mg/kg	NS	NS	NS	NS	0.023	0.0085 J			0.016 J	0.32	< 0.0039			0.65	< 0.0042	< 0.0039	2.4	< 0.0044
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 9.6	< 0.37			< 0.39	< 0.38	< 0.36			< 17	< 0.38	< 0.35	< 9	< 0.4
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 2.1	< 0.083			< 0.087	< 0.084	< 0.08			< 3.9	< 0.084	< 0.078	< 2	< 0.089
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.21	< 0.008			< 0.009	< 0.008	< 0.008			< 0.39	< 0.008	< 0.008	< 0.2	< 0.009
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L11-SB03 08-Jan-16 N 8 - 9 ft	ERM-L11-SB03 08-Jan-16 N 12.5 - 13.5 ft	ERM-L11-SB03 13-Jan-16 N 8 - 9 ft	ERM-L11-SB03 13-Jan-16 N 12.5 - 13.5 ft	ERM-L11-SB04 22-Dec-15 N 0 - 1 ft	ERM-L11-SB04 08-Jan-16 N 8 - 9 ft	ERM-L11-SB04 08-Jan-16 N 13.5 - 14.5 ft	ERM-L11-SB04 13-Jan-16 N 8 - 9 ft	ERM-L11-SB04 13-Jan-16 N 13.5 - 14.5 ft	ERM-L12-SB01 22-Dec-15 N 0 - 1 ft	ERM-L12-SB01 19-Jan-16 N 5.5 - 6.5 ft	ERM-L12-SB01 19-Jan-16 N 9 - 10 ft	ERM-L12-SB02 22-Dec-15 N 0 - 1 ft	ERM-L12-SB02 18-Jan-16 N 6 - 7 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	0.23 J	0.037			4	0.24	< 0.004			< 0.19	0.025	< 0.004	0.11 J	0.007 J
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 3.2	< 0.12			< 0.13	< 0.13	< 0.12			< 5.8	< 0.13	< 0.12	< 3	< 0.13
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 2.1	< 0.083			< 0.087	< 0.084	< 0.08			< 3.9	< 0.084	< 0.078	< 2	< 0.089
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 5.3	< 0.21			< 0.22	< 0.21	< 0.2			< 9.7	< 0.21	< 0.2	< 5	< 0.22
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.11	< 0.004			< 0.004	< 0.004	< 0.004			< 0.19	0.029	< 0.004	< 0.1	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	0.17 J	0.009 J			< 0.004	0.023	< 0.004			< 0.19	0.016 J	< 0.004	< 0.1	< 0.004
Anthracene	mg/kg	190,000	190,000	NS	350	< 0.11	0.013 J			0.052	0.022	< 0.004			< 0.19	0.12	< 0.004	0.12 J	< 0.004
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.2 J	0.03			0.25	0.085	< 0.004			< 0.19	0.25	< 0.004	0.43 J	0.015 J
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.16 J	0.031			0.13	0.045	0.005 J			0.24 J	0.21	< 0.004	0.47 J	0.013 J
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.33 J	0.071			0.19	0.13	0.005 J			0.38 J	0.33	< 0.004	0.58	0.02 J
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.21 J	0.03			0.084	0.044	0.005 J			< 0.19	0.11	< 0.004	0.33 J	0.009 J
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	< 0.11	0.021 J			0.037	0.022	< 0.004			< 0.19	0.11	< 0.004	0.2 J	0.012 J
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 2.1	< 0.083			< 0.087	< 0.084	< 0.08			< 3.9	< 0.084	< 0.078	< 2	< 0.089
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 2.1	< 0.083			< 0.087	< 0.084	< 0.08			< 3.9	< 0.084	< 0.078	< 2	< 0.089
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.53	< 0.021			0.11	< 0.021	< 0.02			< 0.97	0.023 J	< 0.02	< 0.5	< 0.022
Chrysene	mg/kg	760	190,000	NS	230	1	0.09			0.63	0.22	< 0.004			0.35 J	0.24	< 0.004	0.48 J	0.019 J
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.18 J	0.015 J			0.058	0.027	< 0.004			< 0.19	0.038	< 0.004	0.1 J	< 0.004
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.53	< 0.021			1.1	0.061	< 0.02			< 0.97	0.03 J	< 0.02	< 0.5	< 0.022
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 2.1	< 0.083			< 0.087	< 0.084	< 0.08			< 3.9	< 0.084	< 0.078	< 2	< 0.089
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 2.1	< 0.083			< 0.087	< 0.084	< 0.08			< 3.9	< 0.084	< 0.078	< 2	< 0.089
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 2.1	< 0.083			< 0.087	< 0.084	< 0.08			< 3.9	< 0.084	< 0.078	< 2	< 0.089
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 5.3	< 0.21			< 0.22	< 0.21	< 0.2			< 9.7	< 0.21	< 0.2	< 5	< 0.22
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 2.1	< 0.083			< 0.087	< 0.084	< 0.08			< 3.9	< 0.084	< 0.078	< 2	< 0.089
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.19 J	0.043			0.24	0.087	< 0.004			0.33 J	0.47	< 0.004	0.8	0.028
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.11	< 0.004			0.084	0.01 J	< 0.004			< 0.19	0.051	< 0.004	< 0.1	< 0.004
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.11	< 0.004			< 0.004	< 0.004	< 0.004			< 0.19	< 0.004	< 0.004	< 0.1	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 5.3	< 0.21			< 0.22	< 0.21	< 0.2			< 9.7	< 0.21	< 0.2	< 5	< 0.22
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 1.1	< 0.041			< 0.044	< 0.042	< 0.04			< 1.9	< 0.042	< 0.039	< 1	< 0.045
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.15 J	0.02 J			0.047	0.029	< 0.004			< 0.19	0.12	< 0.004	0.26 J	0.01 J
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
Naphthalene	mg/kg	760	190,000	25	**25**	0.44 J	0.028			2.5	0.19	< 0.004			< 0.19	0.023	< 0.004	0.13 J	0.008 J
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.53	< 0.021			0.34	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.53	< 0.021			< 0.022	< 0.021	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 1.1	< 0.041			< 0.044	< 0.042	< 0.04			< 1.9	< 0.042	< 0.039	< 1	< 0.045
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.53	< 0.021			< 0.022	0.037 J	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 1.1	< 0.041			< 0.044	< 0.042	< 0.04			< 1.9	< 0.042	< 0.039	< 1	< 0.045
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.47 J	0.056			2.8	0.25	< 0.004			0.33 J	0.49	< 0.004	0.67	0.028
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.53	< 0.021			0.031 J	0.022 J	< 0.02			< 0.97	< 0.021	< 0.02	< 0.5	< 0.022
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 2.1	< 0.083			< 0.087	< 0.084	< 0.08			< 3.9	< 0.084	< 0.078	< 2	< 0.089
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.34 J	0.051			0.36	0.081	< 0.004			0.32 J	0.42	< 0.004	0.83	0.024
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400			< 0.016	< 0.004	< 0.005			< 0.009	< 0.004	< 0.004	< 0.004	< 0.003	< 0.004	< 0.004

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L11-SB03 08-Jan-16 N 8 - 9 ft	ERM-L11-SB03 08-Jan-16 N 12.5 - 13.5 ft	ERM-L11-SB03 13-Jan-16 N 8 - 9 ft	ERM-L11-SB03 13-Jan-16 N 12.5 - 13.5 ft	ERM-L11-SB04 22-Dec-15 N 0 - 1 ft	ERM-L11-SB04 08-Jan-16 N 8 - 9 ft	ERM-L11-SB04 08-Jan-16 N 13.5 - 14.5 ft	ERM-L11-SB04 13-Jan-16 N 8 - 9 ft	ERM-L11-SB04 13-Jan-16 N 13.5 - 14.5 ft	ERM-L12-SB01 22-Dec-15 N 0 - 1 ft	ERM-L12-SB01 19-Jan-16 N 5.5 - 6.5 ft	ERM-L12-SB01 19-Jan-16 N 9 - 10 ft	ERM-L12-SB02 22-Dec-15 N 0 - 1 ft	ERM-L12-SB02 18-Jan-16 N 6 - 7 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26			< 0.012	< 0.003	< 0.004			< 0.007	< 0.003	< 0.003	< 0.003	< 0.002	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930			< 0.012	< 0.003	< 0.004			< 0.007	< 0.003	< 0.003	< 0.003	< 0.002	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000			< 0.029	< 0.007	0.02 J			0.13	< 0.007	< 0.007	< 0.008	< 0.006	< 0.007	< 0.007
Benzene	mg/kg	290	330	0.13	0.5			< 0.002	< 0.0005	< 0.0006			< 0.001	< 0.0005	< 0.0005	< 0.0006	< 0.0004	< 0.0005	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Carbon tetrachloride	mg/kg	370	430	0.26	0.5			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120			< 0.008	< 0.002	< 0.003			< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Ethanol	mg/kg	NS	NS	NS	NS			< 0.41	< 0.097	< 0.13			< 0.24	< 0.098	< 0.099	< 0.11	< 0.081	< 0.094	< 0.1
Ethyl acetate	mg/kg	5,600	6,400	16	62			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1			< 0.008	< 0.002	< 0.003			< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3			< 0.008	< 0.002	< 0.003			< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5			0.019 J	< 0.002	< 0.003			< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS			< 0.008	< 0.002	< 0.003			< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200			< 0.45	< 0.11	< 0.14			< 0.26	< 0.11	< 0.11	< 0.12	< 0.089	< 0.1	< 0.11
Styrene	mg/kg	10,000	10,000	79	24			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13			< 0.016	< 0.004	< 0.005			< 0.009	< 0.004	< 0.004	< 0.004	< 0.003	< 0.004	< 0.004
Toluene	mg/kg	10,000	10,000	44	100			0.006 J	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Trichloroethene	mg/kg	160	180	0.17	0.5			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Vinyl chloride	mg/kg	61	280	0.027	0.2			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000			< 0.004	< 0.001	< 0.001			< 0.002	< 0.001	< 0.001	< 0.001	< 0.0008	< 0.0009	< 0.001

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L12-SB02 18-Jan-16 N 11 - 12 ft	ERM-L12-SB03 22-Dec-15 N 0 - 1 ft	ERM-L12-SB03 18-Jan-16 N 7.5 - 8.5 ft	ERM-L12-SB03 18-Jan-16 N 11 - 12 ft	ERM-L12-SB04 22-Dec-15 N 0 - 1 ft	ERM-L12-SB04 08-Jan-16 N 9 - 10 ft	ERM-L12-SB04 08-Jan-16 N 12 - 13 ft	ERM-L12-SB04 13-Jan-16 N 9 - 10 ft	ERM-L12-SB04 13-Jan-16 N 12 - 13 ft	ERM-L12-SB05 22-Dec-15 N 0 - 1 ft	ERM-L12-SB06 22-Dec-15 N 0 - 1 ft	ERM-L12-SB06 12-Jan-16 N 11 - 12 ft	ERM-L12-SB06 12-Jan-16 N 14 - 15 ft	ERM-L13-SB01 22-Dec-15 N 0 - 1 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS														
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected			None Detected	None Detected	None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.3	< 6.1	< 6.1	< 5.4	< 6.7	< 6.3	< 7.5	< 7.4	< 7.4	< 6.2	< 6.2	< 6.0	< 5.8	< 5.7
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.22	< 0.22	< 0.21	< 0.19	< 0.24	< 0.22	< 0.27			< 0.22	< 0.21	< 0.21	< 0.21	< 0.21
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	18,900	24,200	17,100	25,700	10,600	18,700	26,000			10,400	12,300	11,600	13,400	4,550
Antimony	mg/kg	**1,300**	190,000	NS	**27**	< 0.563	< 2.71	< 0.527	< 0.527	< 3.19	< 0.638	< 0.791			< 2.26	< 0.568	< 0.442	< 0.441	8.29
Arsenic	mg/kg	**61**	190,000	NS	**29**	3.98	17.7	26.9	3.62	15.9	5.03	5.76			12.2	19.2	4.32	4.00	28.9
Barium	mg/kg	190,000	190,000	NS	8,200	50.8	204	142	236	180	40.7	130			168	107	39.9	45.2	199
Beryllium	mg/kg	6,400	190,000	NS	320	0.561	1.09	0.713	0.680	0.868	0.691	1.01			0.689	0.867	0.684	0.684	0.593
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.0511	3.05	< 0.0478	< 0.239	< 0.0579	< 0.0579	< 0.0718			< 0.0410	< 0.0516	0.0834 J	0.162 J	< 0.240
Calcium	mg/kg	NS	NS	NS	NS	1,430	2,490	1,330	890	4,390	279	2,750			3,430	2,050	930	850	1,450
Chromium	mg/kg	190,000	190,000	NS	190,000	44.9	89.2	74.0	112	36.8	30.4	72.2			23.3	31.0	26.4	24.4	28.9
Cobalt	mg/kg	960	190,000	NS	160	8.16	14.5	12.8	12.0	8.68	4.96	10.1			5.09	6.74	7.08	6.79	4.50
Copper	mg/kg	120,000	190,000	NS	43,000	27.0	213	68.1	67.2	83.9	22.4	65.6			58.1	80.9	14.5	18.0	304
Iron	mg/kg	190,000	190,000	NS	NS	27,000	38,000	38,400	32,900	30,100	29,000	36,000			23,600	25,100	17,600	14,500	40,400
Lead	mg/kg	**1,000**	190,000	NS	**450**	10.9	**491**	72.9	23.3	139	10.0	10.0			448	160	6.38	7.05	**977**
Magnesium	mg/kg	NS	NS	NS	NS	4,300	7,980	5,790	10,900	4,890	3,030	7,490			1,960	2,410	2,410	3,100	700
Manganese	mg/kg	150,000	190,000	NS	**2,000**	169	391	351	217	197	130	166			142	202	195	110	108
Mercury	mg/kg	510	190,000	NS	**10**	< 0.0123	0.0632 J	0.0806 J	< 0.0105	0.460	0.0193 J	< 0.0139			0.402	0.495	< 0.0115	< 0.0111	2.49
Nickel	mg/kg	64,000	190,000	NS	650	21.3	147	45.2	42.4	25.3	13.9	22.0			18.0	24.2	12.4	16.8	17.9
Potassium	mg/kg	NS	NS	NS	NS	1,680	3,970	2,860	5,020	2,610	1,650	2,140			1,290	1,730	1,240	1,650	1,120
Selenium	mg/kg	16,000	190,000	NS	26	< 0.875	3.56	3.11	2.01	3.20	< 0.992	< 1.23			2.53	< 0.884	< 3.43	< 0.685	1.76 J
Silver	mg/kg	16,000	190,000	NS	84	< 0.188	0.746	0.969	0.408 J	0.462 J	< 0.213	< 0.264			0.318 J	0.266 J	< 0.147	< 0.147	0.848
Sodium	mg/kg	NS	NS	NS	NS	89.0 J	247	206	199	167	131	121 J			166	89.6 J	45.7 J	110	475
Thallium	mg/kg	32	190,000	NS	**14**	< 0.782	< 7.53	< 0.732	< 0.732	< 8.86	2.65 J	4.23 J			< 6.27	< 7.89	1.49 J	1.83 J	< 3.67
Vanadium	mg/kg	**220**	190,000	NS	**820**	47.6	59.1	49.1	70.9	44.2	45.5	104			33.9	40.3	34.3	33.3	32.7
Zinc	mg/kg	190,000	190,000	NS	12,000	183	404	226	64.9	168	35.0	42.9			394	190	26.8	39.4	125
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0045	< 0.022	< 0.022	< 0.0039	< 0.95	< 0.023	< 0.0054			< 0.022	< 0.088	< 0.0043	< 0.0041	< 0.021
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0058	< 0.028	< 0.028	< 0.0050	< 1.2	< 0.029	< 0.0068			< 0.029	< 0.11	< 0.0055	< 0.0053	< 0.026
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.01	< 0.049	< 0.048	< 0.0086	< 2.1	< 0.05	< 0.012			< 0.05	< 0.2	< 0.0095	< 0.0092	< 0.046
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0042	< 0.02	< 0.02	< 0.0036	< 0.87	< 0.021	< 0.0049			< 0.02	< 0.081	< 0.0039	< 0.0038	< 0.019
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0042	< 0.02	< 0.02	< 0.0036	< 0.87	< 0.021	< 0.0049			< 0.02	< 0.081	< 0.0039	< 0.0038	< 0.019
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.0042	0.25	0.36	< 0.0036	29	0.48	0.23			< 0.02	< 0.081	< 0.0039	< 0.0038	< 0.019
Aroclor 1260	mg/kg	**46**	190,000	NS	770	< 0.0062	< 0.03	< 0.03	0.0069 J	< 1.3	< 0.031	< 0.0073			1	2.2	< 0.0058	< 0.0056	1.3
Total PCBs	mg/kg	NS	NS	NS	NS	< 0.0042	0.25	0.36	0.0069 J	29	0.48	0.23			1	2.2	< 0.0039	< 0.0038	1.3
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.38	< 0.36	< 0.36	< 0.32	< 10	< 0.38	< 0.45			< 19	< 18	< 0.36	< 0.35	< 17
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.084	< 0.081	< 0.08	< 0.072	< 2.2	< 0.084	< 0.099			< 4.1	< 4	< 0.08	< 0.077	< 3.8
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.008	< 0.008	< 0.008	< 0.007	< 0.22	< 0.008	< 0.01			< 0.41	< 0.41	< 0.008	< 0.008	< 0.38
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L12-SB02 18-Jan-16 N 11 - 12 ft	ERM-L12-SB03 22-Dec-15 N 0 - 1 ft	ERM-L12-SB03 18-Jan-16 N 7.5 - 8.5 ft	ERM-L12-SB03 18-Jan-16 N 11 - 12 ft	ERM-L12-SB04 22-Dec-15 N 0 - 1 ft	ERM-L12-SB04 08-Jan-16 N 9 - 10 ft	ERM-L12-SB04 08-Jan-16 N 12 - 13 ft	ERM-L12-SB04 13-Jan-16 N 9 - 10 ft	ERM-L12-SB04 13-Jan-16 N 12 - 13 ft	ERM-L12-SB05 22-Dec-15 N 0 - 1 ft	ERM-L12-SB06 22-Dec-15 N 0 - 1 ft	ERM-L12-SB06 12-Jan-16 N 11 - 12 ft	ERM-L12-SB06 12-Jan-16 N 14 - 15 ft	ERM-L13-SB01 22-Dec-15 N 0 - 1 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	< 0.004	0.99	0.49	0.074	4.1	0.037	0.081			0.37 J	< 0.2	< 0.004	< 0.004	2.4
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.13	< 0.12	< 0.12	< 0.11	< 3.3	< 0.13	< 0.15			< 6.2	< 6.1	< 0.12	< 0.12	< 5.7
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.084	< 0.081	< 0.08	< 0.072	< 2.2	< 0.084	< 0.099			< 4.1	< 4	< 0.08	< 0.077	< 3.8
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.21	< 0.2	< 0.2	< 0.18	< 5.5	< 0.21	< 0.25			< 10	< 10	< 0.2	< 0.19	< 9.5
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.004	< 0.004	< 0.004	< 0.004	< 0.11	< 0.004	< 0.005			< 0.21	< 0.2	< 0.004	< 0.004	< 0.19
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.004	< 0.004	< 0.004	< 0.004	< 0.11	< 0.004	< 0.005			< 0.21	< 0.2	< 0.004	< 0.004	0.46 J
Anthracene	mg/kg	190,000	190,000	NS	350	< 0.004	0.024	0.02 J	< 0.004	0.25 J	0.007 J	0.007 J			0.25 J	< 0.2	< 0.004	< 0.004	0.52 J
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	< 0.004	0.091	0.073	< 0.004	0.54 J	0.013 J	0.019 J			0.63 J	0.51 J	< 0.004	< 0.004	1.3
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.005 J	0.06	0.062	0.005 J	0.57	0.015 J	0.018 J			0.58 J	0.81 J	< 0.004	< 0.004	1.3
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.005 J	0.11	0.13	0.02	0.93	0.032	0.042			0.77 J	1.1	< 0.004	< 0.004	4
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.007 J	0.046	0.05	0.005 J	0.4 J	0.014 J	0.013 J			0.43 J	0.58 J	< 0.004	< 0.004	1.5
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	< 0.004	0.033	0.05	0.005 J	0.3 J	0.008 J	0.012 J			0.49 J	0.38 J	< 0.004	< 0.004	1.3
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.084	< 0.081	< 0.08	< 0.072	< 2.2	< 0.084	< 0.099			< 4.1	< 4	< 0.08	< 0.077	< 3.8
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.084	< 0.081	< 0.08	< 0.072	< 2.2	< 0.084	< 0.099			< 4.1	< 4	< 0.08	< 0.077	< 3.8
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.021	0.026 J	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
Chrysene	mg/kg	760	190,000	NS	230	< 0.004	0.27	0.18	0.066	1.7	0.043	0.073			0.85 J	0.66 J	< 0.004	< 0.004	3.3
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	< 0.004	0.029	0.019 J	0.004 J	0.19 J	0.01 J	0.01 J			< 0.21	0.27 J	< 0.004	< 0.004	0.66 J
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.021	0.28	0.16	0.028 J	1.3	< 0.021	0.028 J			< 1	< 1	< 0.02	< 0.019	< 0.95
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.084	< 0.081	< 0.08	< 0.072	< 2.2	0.4	< 0.099			< 4.1	< 4	< 0.08	< 0.077	< 3.8
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.084	< 0.081	< 0.08	< 0.072	< 2.2	< 0.084	< 0.099			< 4.1	< 4	< 0.08	< 0.077	< 3.8
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.084	< 0.081	< 0.08	< 0.072	< 2.2	< 0.084	< 0.099			< 4.1	< 4	< 0.08	< 0.077	< 3.8
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.21	< 0.2	< 0.2	< 0.18	< 5.5	< 0.21	< 0.25			< 10	< 10	< 0.2	< 0.19	< 9.5
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.084	< 0.081	< 0.08	< 0.072	< 2.2	< 0.084	< 0.099			< 4.1	< 4	< 0.08	< 0.077	< 3.8
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	< 0.004	0.1	0.12	0.011 J	0.85	0.035	0.042			1.2	0.82 J	< 0.004	< 0.004	2.2
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.004	< 0.004	< 0.004	< 0.004	0.16 J	< 0.004	0.007 J			< 0.21	< 0.2	< 0.004	< 0.004	0.23 J
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.004	< 0.004	< 0.004	< 0.11	< 0.004	< 0.005			< 0.21	< 0.2	< 0.004	< 0.004	< 0.19
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.21	< 0.2	< 0.2	< 0.18	< 5.5	< 0.21	< 0.25			< 10	< 10	< 0.2	< 0.19	< 9.5
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.042	< 0.04	< 0.04	< 0.036	< 1.1	< 0.042	< 0.05			< 2.1	< 2	< 0.04	< 0.038	< 1.9
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	< 0.004	0.034	0.044	< 0.004	0.3 J	0.011 J	0.009 J			0.32 J	0.55 J	< 0.004	< 0.004	1.4
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
Naphthalene	mg/kg	760	190,000	25	**25**	< 0.004	0.7	0.33	0.062	3.2	0.033	0.059			0.38 J	< 0.2	< 0.004	< 0.004	2
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.042	< 0.04	< 0.04	< 0.036	< 1.1	< 0.042	< 0.05			< 2.1	< 2	< 0.04	< 0.038	< 1.9
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.021	0.022 J	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.042	< 0.04	< 0.04	< 0.036	< 1.1	< 0.042	< 0.05			< 2.1	< 2	< 0.04	< 0.038	< 1.9
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.004 J	0.69	0.44	0.2	3.2	0.063	0.11			1.2	0.65 J	< 0.004	< 0.004	3.1
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.021	< 0.02	< 0.02	< 0.018	< 0.55	< 0.021	< 0.025			< 1	< 1	< 0.02	< 0.019	< 0.95
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.084	< 0.081	< 0.08	< 0.072	< 2.2	< 0.084	< 0.099			< 4.1	< 4	< 0.08	< 0.077	< 3.8
Pyrene	mg/kg	96,000	190,000	NS	2,200	< 0.004	0.13	0.12	0.012 J	0.95	0.031	0.038			1.2	0.88 J	< 0.004	< 0.004	2
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	0.14 J	< 0.001	0.002 J	< 0.051	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.004	< 0.004	< 0.004	< 0.004	< 0.005			< 0.006	< 0.006	< 0.22	< 0.005	< 0.004	< 0.21	< 0.005

Table 8
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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L12-SB02 18-Jan-16 N 11 - 12 ft	ERM-L12-SB03 22-Dec-15 N 0 - 1 ft	ERM-L12-SB03 18-Jan-16 N 7.5 - 8.5 ft	ERM-L12-SB03 18-Jan-16 N 11 - 12 ft	ERM-L12-SB04 22-Dec-15 N 0 - 1 ft	ERM-L12-SB04 08-Jan-16 N 9 - 10 ft	ERM-L12-SB04 08-Jan-16 N 12 - 13 ft	ERM-L12-SB04 13-Jan-16 N 9 - 10 ft	ERM-L12-SB04 13-Jan-16 N 12 - 13 ft	ERM-L12-SB05 22-Dec-15 N 0 - 1 ft	ERM-L12-SB06 22-Dec-15 N 0 - 1 ft	ERM-L12-SB06 12-Jan-16 N 11 - 12 ft	ERM-L12-SB06 12-Jan-16 N 14 - 15 ft	ERM-L13-SB01 22-Dec-15 N 0 - 1 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004			< 0.005	< 0.005	< 0.16	< 0.004	< 0.003	< 0.15	< 0.004
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004			< 0.005	< 0.005	< 0.16	< 0.004	< 0.003	< 0.15	< 0.004
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.008	< 0.007	< 0.007	< 0.006	< 0.009			< 0.011	0.012 J	< 0.38	< 0.009	0.08	< 0.36	< 0.008
Benzene	mg/kg	290	330	0.13	0.5	< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0007			< 0.0008	< 0.0008	< 0.027	< 0.0006	< 0.0006	< 0.026	< 0.0006
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003			< 0.003	< 0.003	< 0.11	< 0.002	< 0.002	< 0.1	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Ethanol	mg/kg	NS	NS	NS	NS	< 0.11	< 0.095	< 0.099	< 0.09	< 0.14			< 0.15	< 0.15	< 5.4	0.6 J	< 0.11	< 5.1	< 0.12
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.001	< 0.0009	0.004 J			< 0.002	< 0.002	0.28	< 0.001	< 0.001	< 0.051	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003			< 0.003	< 0.003	< 0.11	< 0.002	< 0.002	< 0.1	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003			< 0.003	< 0.003	< 0.11	< 0.002	< 0.002	< 0.1	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003			< 0.003	< 0.003	< 0.11	< 0.002	< 0.002	< 0.1	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003			< 0.003	< 0.003	< 0.11	< 0.002	< 0.002	< 0.1	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.12	< 0.1	< 0.11	< 0.099	< 0.15			< 0.17	< 0.17	< 5.9	< 0.14	< 0.12	< 5.6	< 0.13
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.004	< 0.004	< 0.004	< 0.004	< 0.005			< 0.006	< 0.006	< 0.22	< 0.005	< 0.004	< 0.21	< 0.005
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001			< 0.002	< 0.002	< 0.054	< 0.001	< 0.001	< 0.051	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	0.002 J	< 0.001	< 0.0009	0.03			< 0.002	0.002 J	1.8	< 0.001	< 0.001	< 0.051	< 0.001

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L13-SB01 12-Jan-16 N 8 - 9 ft	ERM-L13-SB01 12-Jan-16 N 15 - 16 ft	ERM-L13-SB02 22-Dec-15 N 0 - 1 ft	ERM-L13-SB02 12-Jan-16 N 5 - 8 ft	ERM-L13-SB03 22-Dec-15 N 0 - 1 ft	ERM-L13-SB04 22-Dec-15 N 0 - 1 ft	ERM-L13-SB04 12-Jan-16 N 7 - 8 ft	ERM-L13-SB04 12-Jan-16 N 10.5 - 11.5 ft	ERM-L14-SB02 16-Dec-15 N 0 - 1 ft	ERM-L14-SB02 12-Jan-16 N 9 - 10 ft	ERM-L14-SB02 12-Jan-16 N 15 - 16 ft	ERM-L14-SB03 16-Dec-15 N 0 - 1 ft	ERM-L14-SB03 12-Jan-16 N 7 - 8 ft	ERM-L14-SB03 12-Jan-16 N 11 - 12 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS						< 0.25								
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected	None Detected	None Detected		None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.1	< 6.1	< 6.3	< 6.4	< 7.2	< 6.6	< 5.8	< 6.4	< 6.3	< 6.6	< 5.4	< 6.4	< 6.0	< 6.0
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.21	< 0.21	0.42 J	< 0.23	< 0.26	< 0.24	< 0.21	< 0.23	< 0.22	< 0.23	< 0.19	< 0.22	< 0.21	< 0.21
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	15,000	10,600	21,900	16,300	14,000	10,100	14,600	5,130	17,000	21,100	12,900	9,080	21,700	22,800
Antimony	mg/kg	**1,300**	190,000	NS	**27**	< 0.499	< 2.42	**87.3**	< 0.674	< 0.557	< 2.71	< 2.39	< 0.470	3.10	< 2.63	< 2.30	6.79	< 0.620	< 0.507
Arsenic	mg/kg	**61**	190,000	NS	**29**	**36.6**	< 2.65	**30.3**	10.6	16.2	25.1	7.00	4.62	14.5	10.6	0.922 J	**32.4**	4.60	5.06
Barium	mg/kg	190,000	190,000	NS	8,200	84.3	67.4	200	129	94.1	680	29.8	70.6	64.5	75.4	81.4	121	73.1	63.3
Beryllium	mg/kg	6,400	190,000	NS	320	0.750	0.651 J	1.17	0.874	0.897	0.884 J	0.635	0.310 J	0.986	1.13	0.557	0.930	0.663	0.669
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.0453	< 0.220	< 0.0566	5.49	0.999	< 0.246	< 0.0433	0.109 J	< 0.0598	< 0.0478	< 0.0417	< 0.0614	< 0.0562	< 0.0460
Calcium	mg/kg	NS	NS	NS	NS	947	126	14,200	1,470	7,360	3,150	1,060	130	323	353	159	9,970	327	632
Chromium	mg/kg	190,000	190,000	NS	190,000	30.5	15.5	329	31.1	43.5	69.4	32.4	17.4	29.0	42.8	15.8	24.1	43.3	39.8
Cobalt	mg/kg	960	190,000	NS	160	4.31	5.11	9.92	9.36	11.6	7.36	5.32	2.24	7.01	5.71	4.12	4.34	4.02	4.78
Copper	mg/kg	120,000	190,000	NS	43,000	85.6	9.66	252	118	180	227	22.6	9.40	27.8	30.2	9.94	73.8	24.8	27.9
Iron	mg/kg	190,000	190,000	NS	NS	25,500	51,500	48,600	60,300	32,000	68,600	64,600	14,400	23,100	38,700	22,200	33,000	16,500	25,000
Lead	mg/kg	**1,000**	190,000	NS	**450**	123	< 3.68	**739**	139	300	257	11.9	3.02	33.0	3.36	0.958 J	248	8.08	8.19
Magnesium	mg/kg	NS	NS	NS	NS	1,670	1,630	3,270	3,170	4,300	2,750	2,390	839	2,060	3,420	1,550	3,020	3,230	3,060
Manganese	mg/kg	150,000	190,000	NS	**2,000**	64.8	139	376	255	332	297	150	113	79.7	138	85.3	283	74.3	92.7
Mercury	mg/kg	510	190,000	NS	**10**	0.413	< 0.0119	8.72	0.232	0.323	**10.1**	< 0.0108	< 0.0122	0.112 J	0.247	< 0.0103	0.295	< 0.0118	< 0.0117
Nickel	mg/kg	64,000	190,000	NS	650	16.4	10.9	64.2	146	104	57.5	33.1	7.67	16.7	17.7	10.6	23.7	14.6	17.5
Potassium	mg/kg	NS	NS	NS	NS	1,370	1,220	1,630	1,430	2,190	1,570	1,180	533	1,230	1,720	841	1,020	2,080	1,500
Selenium	mg/kg	16,000	190,000	NS	26	2.76	< 3.77	< 0.971	< 1.05	< 0.866	< 4.22	< 0.743	< 0.730	5.74	< 4.10	< 3.57	9.19	< 0.964	< 3.95
Silver	mg/kg	16,000	190,000	NS	84	< 0.166	< 0.808	0.883	< 0.225	0.615	1.72 J	< 0.159	< 0.157	< 0.220	< 0.176	< 0.153	0.457 J	< 0.207	< 0.169
Sodium	mg/kg	NS	NS	NS	NS	333	273 J	347	102 J	199	233	82.2 J	95.0	667	1,010	167	217	561	289
Thallium	mg/kg	32	190,000	NS	**14**	2.31 J	< 3.37	< 8.67	1.95 J	< 7.73	< 7.53	2.23 J	0.790 J	< 0.915	3.46	0.904 J	< 0.939	2.09 J	2.49 J
Vanadium	mg/kg	**220**	190,000	NS	**820**	40.7	20.5	73.4	35.9	51.2	67.9	43.7	12.6	38.1	62.4	19.4	39.2	39.9	45.3
Zinc	mg/kg	190,000	190,000	NS	12,000	180	33.8	896	1,580	769	909	35.6	38.7	96.9	52.4	30.7	311	44.0	45.7
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.044	< 0.0044	< 0.22	< 4.5	< 0.25	< 0.24	< 0.0042	< 0.023	< 0.023	< 0.0047	< 0.0039	< 0.0046	< 0.0043	< 0.021
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.056	< 0.0056	< 0.29	< 5.8	< 0.33	< 0.3	< 0.0053	< 0.029	< 0.029	< 0.0061	< 0.0050	< 0.0058	< 0.0055	< 0.027
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.098	< 0.0097	< 0.5	< 10	< 0.57	< 0.52	< 0.0093	< 0.051	< 0.051	< 0.011	< 0.0087	< 0.01	< 0.0096	< 0.047
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.04	< 0.0040	< 0.21	< 4.1	< 0.23	< 0.22	< 0.0038	< 0.021	< 0.021	< 0.0044	< 0.0036	< 0.0042	< 0.0040	< 0.02
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.04	< 0.0040	< 0.21	< 4.1	< 0.23	< 0.22	< 0.0038	< 0.021	< 0.021	< 0.0044	< 0.0036	< 0.0042	< 0.0040	< 0.02
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.04	< 0.0040	< 0.21	64	< 0.23	< 0.22	< 0.0038	< 0.021	0.45	< 0.0044	< 0.0036	0.23	< 0.0040	< 0.02
Aroclor 1260	mg/kg	**46**	190,000	NS	770	1.7	< 0.0059	3.8	< 6.1	5.8	8.3	< 0.0057	0.083 J	0.34	0.31	< 0.0053	0.23	< 0.0059	0.076 J
Total PCBs	mg/kg	NS	NS	NS	NS	1.7	< 0.0040	3.8	64	5.8	8.3	< 0.0038	0.083 J	0.79	0.31	< 0.0036	0.46	< 0.0040	0.076 J
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	0.049	< 0.02	< 1	< 0.021	< 1.2	13	< 0.019	0.07	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.37	< 0.36	< 19	< 0.38	< 21	< 20	< 0.34	< 0.38	< 0.38	< 9.8	< 0.33	< 1.9	< 0.36	< 0.36
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.082	< 0.08	< 4.2	< 0.084	< 4.7	< 4.3	< 0.076	< 0.085	< 0.084	< 2.2	< 0.072	< 0.42	< 0.079	< 0.079
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.008	< 0.008	< 0.42	< 0.008	< 0.47	< 0.43	< 0.008	< 0.008	< 0.008	< 0.22	< 0.007	< 0.042	< 0.008	< 0.008
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L13-SB01 12-Jan-16 N 8 - 9 ft	ERM-L13-SB01 12-Jan-16 N 15 - 16 ft	ERM-L13-SB02 22-Dec-15 N 0 - 1 ft	ERM-L13-SB02 12-Jan-16 N 5 - 8 ft	ERM-L13-SB03 22-Dec-15 N 0 - 1 ft	ERM-L13-SB04 22-Dec-15 N 0 - 1 ft	ERM-L13-SB04 12-Jan-16 N 7 - 8 ft	ERM-L13-SB04 12-Jan-16 N 10.5 - 11.5 ft	ERM-L14-SB02 16-Dec-15 N 0 - 1 ft	ERM-L14-SB02 12-Jan-16 N 9 - 10 ft	ERM-L14-SB02 12-Jan-16 N 15 - 16 ft	ERM-L14-SB03 16-Dec-15 N 0 - 1 ft	ERM-L14-SB03 12-Jan-16 N 7 - 8 ft	ERM-L14-SB03 12-Jan-16 N 11 - 12 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	0.17	< 0.004	1.4	0.052	0.28 J	0.35 J	< 0.004	< 0.004	0.09	< 0.11	0.56	0.76	< 0.004	0.027
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.12	< 0.12	< 6.2	< 0.13	< 7	< 6.5	< 0.11	< 0.13	< 0.13	< 3.3	< 0.11	< 0.63	< 0.12	< 0.12
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.082	< 0.08	< 4.2	< 0.084	< 4.7	< 4.3	< 0.076	< 0.085	< 0.084	< 2.2	< 0.072	< 0.42	< 0.079	< 0.079
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.2	< 0.2	< 10	< 0.21	< 12	< 11	< 0.19	< 0.21	< 0.21	< 5.5	< 0.18	< 1.1	< 0.2	< 0.2
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.004	< 0.004	0.25 J	0.02 J	< 0.23	< 0.22	< 0.004	< 0.004	0.011 J	< 0.11	0.027	0.068 J	< 0.004	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	0.021 J	< 0.004	0.35 J	0.011 J	< 0.23	< 0.22	< 0.004	< 0.004	0.011 J	< 0.11	< 0.004	0.065 J	< 0.004	< 0.004
Anthracene	mg/kg	190,000	190,000	NS	350	0.032	< 0.004	0.6 J	0.064	< 0.23	0.32 J	< 0.004	< 0.004	0.025	< 0.11	0.026	0.15	< 0.004	< 0.004
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.066	< 0.004	1.6	0.12	0.26 J	0.23 J	< 0.004	< 0.004	0.051	< 0.11	0.032	0.52	< 0.004	< 0.004
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.072	< 0.004	1.3	0.13	0.26 J	0.53 J	< 0.004	< 0.004	0.051	< 0.11	0.03	0.49	< 0.004	< 0.004
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.2	< 0.004	2.4	0.17	0.45 J	0.54 J	< 0.004	< 0.004	0.13	0.14 J	0.041	0.86	< 0.004	0.005 J
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.089	< 0.004	1.6	0.11	0.26 J	0.67 J	< 0.004	< 0.004	0.044	0.15 J	0.02	0.33	< 0.004	< 0.004
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.072	< 0.004	0.84 J	0.087	< 0.23	0.25 J	< 0.004	< 0.004	0.042	< 0.11	0.014 J	0.41	< 0.004	< 0.004
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.082	< 0.08	< 4.2	< 0.084	< 4.7	< 4.3	< 0.076	< 0.085	< 0.084	< 2.2	< 0.072	< 0.42	< 0.079	< 0.079
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.082	< 0.08	13	< 0.084	< 4.7	17	< 0.076	< 0.085	< 0.084	< 2.2	< 0.072	< 0.42	< 0.079	< 0.079
Carbazole	mg/kg	4,600	190,000	NS	110	0.025 J	< 0.02	< 1	0.028 J	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
Chrysene	mg/kg	760	190,000	NS	230	0.14	< 0.004	2.3	0.17	0.39 J	0.48 J	< 0.004	< 0.004	0.11	0.12 J	0.032	0.91	< 0.004	0.005 J
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.026	< 0.004	0.42 J	0.026	< 0.23	< 0.22	< 0.004	< 0.004	0.011 J	< 0.11	0.005 J	0.1 J	< 0.004	< 0.004
Dibenzofuran	mg/kg	3,200	190,000	NS	310	0.054	< 0.02	< 1	0.031 J	< 1.2	< 1.1	< 0.019	< 0.021	0.042	< 0.55	0.022 J	0.27	< 0.02	< 0.02
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.082	< 0.08	< 4.2	< 0.084	< 4.7	< 4.3	< 0.076	< 0.085	< 0.084	< 2.2	< 0.072	< 0.42	< 0.079	< 0.079
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.082	< 0.08	< 4.2	< 0.084	< 4.7	< 4.3	< 0.076	< 0.085	< 0.084	< 2.2	< 0.072	< 0.42	< 0.079	< 0.079
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.082	< 0.08	< 4.2	< 0.084	< 4.7	< 4.3	< 0.076	< 0.085	< 0.084	< 2.2	< 0.072	< 0.42	< 0.079	< 0.079
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.2	< 0.2	< 10	< 0.21	< 12	< 11	< 0.19	< 0.21	< 0.21	< 5.5	< 0.18	< 1.1	< 0.2	< 0.2
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.082	< 0.08	< 4.2	< 0.084	< 4.7	< 4.3	< 0.076	< 0.085	< 0.084	< 2.2	< 0.072	< 0.42	< 0.079	< 0.079
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.1	< 0.004	2.8	0.29	0.48 J	0.36 J	< 0.004	< 0.004	0.1	< 0.11	0.085	0.86	< 0.004	< 0.004
Fluorene	mg/kg	130,000	190,000	NS	3,800	0.016 J	< 0.004	< 0.21	0.027	< 0.23	< 0.22	< 0.004	< 0.004	0.018 J	< 0.11	0.02	0.085 J	< 0.004	< 0.004
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.004	< 0.21	< 0.004	< 0.23	< 0.22	< 0.004	< 0.004	< 0.004	< 0.11	< 0.004	< 0.021	< 0.004	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.2	< 0.2	< 10	< 0.21	< 12	< 11	< 0.19	< 0.21	< 0.21	< 5.5	< 0.18	< 1.1	< 0.2	< 0.2
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.041	< 0.04	< 2.1	< 0.042	< 2.3	< 2.2	< 0.038	< 0.042	< 0.042	< 1.1	< 0.036	< 0.21	< 0.04	< 0.039
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.074	< 0.004	0.88 J	0.083	< 0.23	0.48 J	< 0.004	< 0.004	0.042	< 0.11	0.015 J	0.28	< 0.004	< 0.004
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
Naphthalene	mg/kg	760	190,000	25	**25**	0.16	< 0.004	1.8	0.055	0.3 J	0.34 J	< 0.004	< 0.004	0.081	0.47 J	**74**	0.59	0.005 J	0.16
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.041	< 0.04	< 2.1	< 0.042	< 2.3	< 2.2	< 0.038	< 0.042	< 0.042	< 1.1	< 0.036	< 0.21	< 0.04	< 0.039
p-Cresol	mg/kg	16,000	190,000	NS	58	0.16	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.041	< 0.04	< 2.1	< 0.042	< 2.3	< 2.2	< 0.038	< 0.042	< 0.042	< 1.1	< 0.036	< 0.21	< 0.04	< 0.039
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.21	< 0.004	2.5	0.26	0.52 J	0.54 J	< 0.004	< 0.004	0.14	< 0.11	0.098	1	< 0.004	0.009 J
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.02	< 0.02	< 1	< 0.021	< 1.2	< 1.1	< 0.019	< 0.021	< 0.021	< 0.55	< 0.018	< 0.11	< 0.02	< 0.02
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.082	< 0.08	< 4.2	< 0.084	< 4.7	< 4.3	< 0.076	< 0.085	< 0.084	< 2.2	< 0.072	< 0.42	< 0.079	< 0.079
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.11	< 0.004	2.5	0.29	0.47 J	0.38 J	< 0.004	< 0.004	0.092	0.12 J	0.071	0.86	< 0.004	0.005 J
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	0.009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001 J	0.003 J	0.001 J	< 0.0008	< 0.001	< 0.0009	< 0.0008
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.005	< 0.005	< 0.004	< 0.005	< 0.005	< 0.004	< 0.005	0.004 J	< 0.004	< 0.004	< 0.003	< 0.005	< 0.004	< 0.003

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L13-SB01 12-Jan-16 N 8 - 9 ft	ERM-L13-SB01 12-Jan-16 N 15 - 16 ft	ERM-L13-SB02 22-Dec-15 N 0 - 1 ft	ERM-L13-SB02 12-Jan-16 N 5 - 8 ft	ERM-L13-SB03 22-Dec-15 N 0 - 1 ft	ERM-L13-SB04 22-Dec-15 N 0 - 1 ft	ERM-L13-SB04 12-Jan-16 N 7 - 8 ft	ERM-L13-SB04 12-Jan-16 N 10.5 - 11.5 ft	ERM-L14-SB02 16-Dec-15 N 0 - 1 ft	ERM-L14-SB02 12-Jan-16 N 9 - 10 ft	ERM-L14-SB02 12-Jan-16 N 15 - 16 ft	ERM-L14-SB03 16-Dec-15 N 0 - 1 ft	ERM-L14-SB03 12-Jan-16 N 7 - 8 ft	ERM-L14-SB03 12-Jan-16 N 11 - 12 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.004	< 0.003	< 0.003	< 0.004	< 0.004	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.002	< 0.003	< 0.003	< 0.002
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.004	< 0.003	< 0.003	< 0.004	< 0.004	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.002	< 0.003	< 0.003	< 0.002
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.027 J	< 0.008	< 0.008	< 0.009	0.1	0.012 J	0.044	0.038	0.03	< 0.007	0.01 J	< 0.008	< 0.007	< 0.006
Benzene	mg/kg	290	330	0.13	0.5	< 0.0007	< 0.0006	< 0.0006	< 0.0007	< 0.0006	< 0.0006	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.006 J	0.008	0.001 J	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.003	< 0.002	< 0.002	< 0.003	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001 J	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Ethanol	mg/kg	NS	NS	NS	NS	< 0.14	< 0.11	< 0.11	< 0.13	36 E	< 0.11	< 0.14	< 0.097	< 0.096	< 0.093	< 0.079	< 0.12	< 0.094	< 0.083
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Methyl bromide	mg/kg	400	460	0.54	1	< 0.003	< 0.002	< 0.002	< 0.003	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.003	< 0.002	< 0.002	< 0.003	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.003	< 0.002	< 0.002	< 0.003	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.003	< 0.002	< 0.002	< 0.003	< 0.003	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.15	< 0.12	< 0.12	< 0.14	< 0.14	< 0.12	< 0.15	< 0.11	< 0.11	< 0.1	< 0.087	< 0.13	< 0.1	< 0.092
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.005	< 0.005	< 0.004	< 0.005	< 0.005	< 0.004	< 0.005	< 0.004	< 0.004	< 0.004	< 0.003	< 0.005	< 0.004	< 0.003
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	0.002 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008
Xylenes	mg/kg	8,000	9,100	990	1,000	0.009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.0009	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L14-SB04 16-Dec-15 N 0 - 1 ft	ERM-L14-SB04 12-Jan-16 N 6 - 7 ft	ERM-L14-SB04 12-Jan-16 N 10 - 11 ft	ERM-L15-SB01 15-Dec-15 N 0 - 1 ft	ERM-L15-SB01 22-Dec-15 N 15.5 - 16.5 ft	ERM-L15-SB01 22-Dec-15 N 21 - 22 ft	ERM-L15-SB02 15-Dec-15 N 0 - 1 ft	ERM-L15-SB02 22-Dec-15 N 7 - 8 ft	ERM-L15-SB02 22-Dec-15 N 11 - 12 ft	ERM-L15-SB03 14-Dec-15 N 0 - 1 ft	ERM-L15-SB03 23-Dec-15 N 7 - 8 ft	ERM-L15-SB03 23-Dec-15 N 11 - 12 ft	ERM-L15-SB04 14-Dec-15 N 0 - 1 ft	ERM-L15-SB04 23-Dec-15 N 8.5 - 9 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS				< 0.25			< 0.25							
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected		None Detected	None Detected		None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 5.7	< 6.0	< 6.8	< 6.1	< 9.4	< 8.5	< 6.1	< 6.2	< 6.2	< 6.4	< 6.1	< 5.9	< 5.8	< 6.2
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.21	< 0.21	< 0.24	< 0.22	< 0.33	< 0.30	< 0.22	< 0.22	< 0.22	< 0.23	< 0.21	< 0.20	< 0.20	< 0.22
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	4,570	24,300	14,800	12,200	19,300	13,600	11,400	17,800	13,900	15,600	16,500	12,900	10,800	18,700
Antimony	mg/kg	**1,300**	190,000	NS	**27**	6.23	< 0.522	< 0.534	3.65	< 0.991	< 0.917	5.33	< 0.661	< 0.646	**1,500**	< 0.443	< 0.432	4.89	< 0.473
Arsenic	mg/kg	**61**	190,000	NS	**29**	**41.8**	1.61 J	9.42	4.20	2.07 J	5.07	6.63	5.26	9.87	12.1	2.92	4.43	**55.4**	11.1
Barium	mg/kg	190,000	190,000	NS	8,200	82.6	76.4	65.0	117	65.9	52.4	134	57.7	70.1	91.7	64.9	41.9	166	68.9
Beryllium	mg/kg	6,400	190,000	NS	320	0.797	0.692	0.706	0.783	0.723 J	0.762 J	0.739	0.947	1.26	0.956	1.01	0.689	0.902	0.918
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.0561	< 0.0473	0.133 J	0.0912 J	0.619 J	0.643 J	< 0.0568	0.889	1.28	0.644	< 0.0402	0.114 J	< 0.0494	0.0867 J
Calcium	mg/kg	NS	NS	NS	NS	3,980	428	948	8,020	5,000	1,760	3,820	1,610	1,910	4,540	596	971	2,190	689
Chromium	mg/kg	190,000	190,000	NS	190,000	15.4	42.9	35.4	29.8	43.1	29.1	32.0	32.3	30.3	38.3	43.1	27.8	33.7	36.6
Cobalt	mg/kg	960	190,000	NS	160	6.38	6.27	4.33	7.22	8.96	7.12	7.83	6.98	12.1	8.60	5.78	6.69	6.96	5.50
Copper	mg/kg	120,000	190,000	NS	43,000	53.5	28.1	29.3	59.9	21.2	17.3	67.6	22.9	31.8	113	19.4	19.8	2,430	45.8
Iron	mg/kg	190,000	190,000	NS	NS	30,600	18,300	25,700	22,500	15,300	13,300	24,200	23,500	32,100	32,000	28,400	19,800	46,600	27,200
Lead	mg/kg	**1,000**	190,000	NS	**450**	75.5	8.16	10.6	165	9.60	9.82	349	21.4	30.4	**15,400**	7.28	17.0	300	22.7
Magnesium	mg/kg	NS	NS	NS	NS	961	3,300	2,670	3,260	3,990	2,270	3,210	2,900	2,490	3,550	3,340	2,240	2,780	3,260
Manganese	mg/kg	150,000	190,000	NS	**2,000**	146	83.0	83.9	208	157	94.2	220	196	242	310	154	199	157	174
Mercury	mg/kg	510	190,000	NS	**10**	0.300	0.0195 J	0.0623 J	0.492	< 0.0182	0.0525 J	0.723	0.0282 J	0.0445 J	0.711	< 0.0119	0.0402 J	0.618	0.0458 J
Nickel	mg/kg	64,000	190,000	NS	650	16.7	21.1	16.3	25.2	20.9	16.0	27.4	14.3	17.7	31.1	14.7	12.1	81.8	18.8
Potassium	mg/kg	NS	NS	NS	NS	838	2,130	1,880	2,110	2,150	1,230	1,880	1,560	1,630	1,910	1,530	1,130	2,400	1,920
Selenium	mg/kg	16,000	190,000	NS	26	9.63	< 0.811	< 0.831	4.07	< 1.54	< 1.43	4.74	< 1.03	< 1.00	1.30 J	4.60 J	< 3.36	3.92	5.28 J
Silver	mg/kg	16,000	190,000	NS	84	< 0.206	< 0.174	< 0.178	0.275 J	< 0.330	< 0.306	< 0.209	< 0.220	< 0.215	1.19	< 0.148	< 0.144	0.983	< 0.788
Sodium	mg/kg	NS	NS	NS	NS	158	313	219	155	2,250	2,540	124	313	371	101 J	7,520	256	256	79.8 J
Thallium	mg/kg	32	190,000	NS	**14**	< 0.858	2.37 J	2.55 J	< 0.866	< 1.38	< 1.27	< 0.869	< 0.918	< 0.897	< 0.962	1.61 J	1.08 J	2.57 J	1.54 J
Vanadium	mg/kg	**220**	190,000	NS	**820**	43.9	45.7	44.3	35.8	55.2	31.4	40.1	43.8	48.0	53.7	39.2	40.4	45.8	49.7
Zinc	mg/kg	190,000	190,000	NS	12,000	107	47.9	47.4	354	41.1	36.5	246	52.5	123	287	36.4	35.4	369	62.7
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.02	< 0.0043	< 0.0048	< 0.022	< 0.0067	< 0.0061	< 0.043	< 0.0044	< 0.0044	< 0.23	< 0.0043	< 0.0042	< 0.041	< 0.0045
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.026	< 0.0055	< 0.0062	< 0.028	< 0.0086	< 0.0078	< 0.055	< 0.0057	< 0.0056	< 0.29	< 0.0055	< 0.0054	< 0.053	< 0.0057
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.045	< 0.0095	< 0.011	< 0.048	< 0.015	< 0.014	< 0.096	< 0.0098	< 0.0097	< 0.51	< 0.0096	< 0.0093	< 0.092	< 0.0099
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.019	< 0.0039	< 0.0044	< 0.02	< 0.0061	< 0.0056	< 0.04	< 0.0041	< 0.0040	< 0.21	< 0.0040	< 0.0039	< 0.038	< 0.0041
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.019	< 0.0039	< 0.0044	< 0.02	< 0.0061	< 0.0056	< 0.04	< 0.0041	< 0.0040	< 0.21	< 0.0040	< 0.0039	< 0.038	< 0.0041
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.019	< 0.0039	< 0.0044	< 0.02	< 0.0061	< 0.0056	< 0.04	< 0.0041	< 0.0040	< 0.21	< 0.0040	< 0.0039	0.17 J	< 0.0041
Aroclor 1260	mg/kg	**46**	190,000	NS	770	0.86	< 0.0058	0.14	0.8	< 0.0091	0.024 J	2.8	0.019 J	< 0.0060	4.7	< 0.0059	0.012 J	0.45	0.03
Total PCBs	mg/kg	NS	NS	NS	NS	0.86	< 0.0039	0.14	0.8	< 0.0061	0.024 J	2.8	0.019 J	< 0.0040	4.7	< 0.0040	0.012 J	0.62	0.03
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 1.7	< 0.35	< 0.4	< 3.6	< 0.56	< 0.51	< 3.6	< 0.37	< 0.36	< 3.8	< 0.36	< 0.35	< 1.7	< 0.37
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.38	< 0.079	< 0.089	< 0.8	< 0.12	< 0.11	< 0.8	< 0.081	< 0.081	< 0.84	< 0.081	< 0.078	< 0.38	< 0.083
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.038	< 0.008	< 0.009	< 0.08	< 0.012	< 0.011	< 0.08	< 0.008	< 0.008	< 0.084	< 0.008	< 0.008	< 0.038	< 0.008
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L14-SB04 16-Dec-15 N 0 - 1 ft	ERM-L14-SB04 12-Jan-16 N 6 - 7 ft	ERM-L14-SB04 12-Jan-16 N 10 - 11 ft	ERM-L15-SB01 15-Dec-15 N 0 - 1 ft	ERM-L15-SB01 22-Dec-15 N 15.5 - 16.5 ft	ERM-L15-SB01 22-Dec-15 N 21 - 22 ft	ERM-L15-SB02 15-Dec-15 N 0 - 1 ft	ERM-L15-SB02 22-Dec-15 N 7 - 8 ft	ERM-L15-SB02 22-Dec-15 N 11 - 12 ft	ERM-L15-SB03 14-Dec-15 N 0 - 1 ft	ERM-L15-SB03 23-Dec-15 N 7 - 8 ft	ERM-L15-SB03 23-Dec-15 N 11 - 12 ft	ERM-L15-SB04 14-Dec-15 N 0 - 1 ft	ERM-L15-SB04 23-Dec-15 N 8.5 - 9 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	1	< 0.004	0.038	0.054 J	< 0.006	< 0.006	0.073 J	0.017 J	0.051	0.084 J	< 0.004	0.005 J	0.26	0.018 J
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.57	< 0.12	< 0.13	< 1.2	< 0.19	< 0.17	< 1.2	< 0.12	< 0.12	< 1.3	< 0.12	< 0.12	< 0.57	< 0.12
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.38	< 0.079	< 0.089	< 0.8	< 0.12	< 0.11	< 0.8	< 0.081	< 0.081	< 0.84	< 0.081	< 0.078	< 0.38	< 0.083
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.95	< 0.2	< 0.22	< 2	< 0.31	< 0.28	< 2	< 0.2	< 0.2	< 2.1	< 0.2	< 0.2	< 0.95	< 0.21
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	0.11	< 0.004	< 0.004	0.048 J	< 0.006	< 0.006	0.052 J	0.01 J	0.021	0.043 J	< 0.004	< 0.004	0.054 J	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	0.17	< 0.004	0.006 J	< 0.04	< 0.006	0.007 J	< 0.04	0.005 J	0.007 J	0.063 J	< 0.004	< 0.004	0.039 J	< 0.004
Anthracene	mg/kg	190,000	190,000	NS	350	0.21	< 0.004	0.01 J	0.14 J	< 0.006	< 0.006	0.17 J	0.019 J	0.056	0.14 J	< 0.004	0.006 J	0.11	0.006 J
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.9	< 0.004	0.03	0.55	< 0.006	0.014 J	0.42	0.032	0.062	0.49	< 0.004	0.019 J	0.22	0.011 J
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.87	< 0.004	0.052	0.55	< 0.006	0.02 J	0.46	0.031	0.056	0.51	< 0.004	0.023	0.15	0.012 J
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	2.4	< 0.004	0.093	0.71	< 0.006	0.022 J	0.61	0.044	0.1	0.72	< 0.004	0.03	0.3	0.022
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.44	< 0.004	0.032	0.41	< 0.006	0.01 J	0.3	0.025	0.045	0.41	< 0.004	0.022	0.14	< 0.004
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.71	< 0.004	0.043	0.36	< 0.006	0.015 J	0.32	0.019 J	0.03	0.32	< 0.004	0.016 J	0.088 J	0.009 J
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.38	< 0.079	< 0.089	< 0.8	< 0.12	< 0.11	< 0.8	< 0.081	< 0.081	< 0.84	< 0.081	< 0.078	< 0.38	< 0.083
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.38	< 0.079	< 0.089	< 0.8	< 0.12	< 0.11	< 0.8	< 0.081	< 0.081	< 0.84	< 0.081	< 0.078	< 0.38	< 0.083
Carbazole	mg/kg	4,600	190,000	NS	110	0.11 J	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
Chrysene	mg/kg	760	190,000	NS	230	2	< 0.004	0.067	0.52	< 0.006	0.013 J	0.47	0.044	0.097	0.57	< 0.004	0.025	0.47	0.024
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.15	< 0.004	0.009 J	0.086 J	< 0.006	0.009 J	0.086 J	0.009 J	0.019 J	0.12 J	< 0.004	0.007 J	0.057 J	< 0.004
Dibenzofuran	mg/kg	3,200	190,000	NS	310	0.52	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	0.075	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.38	< 0.079	< 0.089	< 0.8	< 0.12	< 0.11	0.88 J	< 0.081	< 0.081	< 0.84	< 0.081	< 0.078	< 0.38	< 0.083
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.38	< 0.079	< 0.089	< 0.8	< 0.12	< 0.11	< 0.8	< 0.081	< 0.081	< 0.84	< 0.081	< 0.078	< 0.38	< 0.083
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.38	< 0.079	< 0.089	< 0.8	< 0.12	< 0.11	< 0.8	< 0.081	< 0.081	< 0.84	< 0.081	< 0.078	< 0.38	< 0.083
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.95	< 0.2	< 0.22	< 2	< 0.31	< 0.28	< 2	< 0.2	< 0.2	< 2.1	< 0.2	< 0.2	< 0.95	< 0.21
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.38	< 0.079	< 0.089	< 0.8	< 0.12	< 0.11	< 0.8	< 0.081	< 0.081	< 0.84	< 0.081	< 0.078	< 0.38	< 0.083
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.96	< 0.004	0.028	1	< 0.006	0.024 J	0.9	0.077	0.14	0.86	< 0.004	0.034	0.45	0.018 J
Fluorene	mg/kg	130,000	190,000	NS	3,800	0.11	< 0.004	0.005 J	0.051 J	< 0.006	< 0.006	0.062 J	0.02 J	0.05	< 0.042	< 0.004	< 0.004	0.081 J	< 0.004
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.019	< 0.004	< 0.004	< 0.04	< 0.006	< 0.006	< 0.04	< 0.004	< 0.004	< 0.042	< 0.004	< 0.004	< 0.019	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.95	< 0.2	< 0.22	< 2	< 0.31	< 0.28	< 2	< 0.2	< 0.2	< 2.1	< 0.2	< 0.2	< 0.95	< 0.21
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.19	< 0.039	< 0.045	< 0.4	< 0.062	< 0.056	< 0.4	< 0.041	< 0.04	< 0.42	< 0.04	< 0.039	< 0.19	< 0.041
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.49	< 0.004	0.03	0.37	< 0.006	0.013 J	0.26	0.016 J	0.038	0.34	< 0.004	0.013 J	0.099	< 0.004
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
Naphthalene	mg/kg	760	190,000	25	**25**	1.2	0.004 J	0.28	0.063 J	< 0.006	< 0.006	0.14 J	0.02 J	0.047	0.096 J	0.005 J	< 0.004	0.19	0.014 J
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.19	< 0.039	< 0.045	< 0.4	< 0.062	< 0.056	< 0.4	< 0.041	< 0.04	< 0.42	< 0.04	< 0.039	< 0.19	< 0.041
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.095	< 0.02	0.051	< 0.2	0.031 J	0.36	< 0.2	0.03 J	0.041	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.19	< 0.039	< 0.045	< 0.4	< 0.062	< 0.056	< 0.4	< 0.041	< 0.04	< 0.42	< 0.04	< 0.039	< 0.19	< 0.041
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	1.3	< 0.004	0.061	0.6	< 0.006	0.014 J	0.68	0.07	0.13	0.51	< 0.004	0.024	0.59	0.03
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.095	< 0.02	< 0.022	< 0.2	< 0.031	< 0.028	< 0.2	< 0.02	< 0.02	< 0.21	< 0.02	< 0.02	< 0.095	< 0.021
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.38	< 0.079	< 0.089	< 0.8	< 0.12	< 0.11	< 0.8	< 0.081	< 0.081	< 0.84	< 0.081	< 0.078	< 0.38	< 0.083
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.99	< 0.004	0.043	0.95	< 0.006	0.022 J	0.8	0.069	0.13	0.83	< 0.004	0.038	0.41	0.022
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	0.003 J	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.005	< 0.004	< 0.004	< 0.004	< 0.006	0.12	< 0.004	< 0.004	< 0.004	< 0.005	< 0.005	< 0.004	< 0.004	< 0.004

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L14-SB04 16-Dec-15 N 0 - 1 ft	ERM-L14-SB04 12-Jan-16 N 6 - 7 ft	ERM-L14-SB04 12-Jan-16 N 10 - 11 ft	ERM-L15-SB01 15-Dec-15 N 0 - 1 ft	ERM-L15-SB01 22-Dec-15 N 15.5 - 16.5 ft	ERM-L15-SB01 22-Dec-15 N 21 - 22 ft	ERM-L15-SB02 15-Dec-15 N 0 - 1 ft	ERM-L15-SB02 22-Dec-15 N 7 - 8 ft	ERM-L15-SB02 22-Dec-15 N 11 - 12 ft	ERM-L15-SB03 14-Dec-15 N 0 - 1 ft	ERM-L15-SB03 23-Dec-15 N 7 - 8 ft	ERM-L15-SB03 23-Dec-15 N 11 - 12 ft	ERM-L15-SB04 14-Dec-15 N 0 - 1 ft	ERM-L15-SB04 23-Dec-15 N 8.5 - 9 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.004	< 0.003	< 0.003	< 0.003	< 0.005	< 0.006	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.004	< 0.003	< 0.003	< 0.003	< 0.005	< 0.006	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.009	0.009 J	0.01 J	< 0.006	0.017 J	0.61	< 0.007	0.015 J	0.017 J	< 0.009	< 0.008	< 0.006	< 0.007	< 0.006
Benzene	mg/kg	290	330	0.13	0.5	< 0.0006	< 0.0004	< 0.0005	< 0.0004	< 0.0008	0.001 J	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	< 0.0009	< 0.001	< 0.0009	0.004 J	0.021	< 0.001	< 0.0009	< 0.001	< 0.001	0.002 J	< 0.0009	< 0.0009	< 0.0009
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Ethanol	mg/kg	NS	NS	NS	NS	< 0.12	< 0.09	< 0.1	< 0.088	< 0.16	< 0.22	< 0.096	< 0.094	< 0.1	< 0.12	< 0.11	< 0.092	< 0.093	< 0.093
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.14	< 0.099	< 0.11	< 0.096	< 0.17	< 0.24	< 0.11	< 0.1	< 0.11	< 0.14	< 0.13	< 0.1	< 0.1	< 0.1
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.005	< 0.004	< 0.004	< 0.004	< 0.006	< 0.009	< 0.004	< 0.004	< 0.004	< 0.005	< 0.005	< 0.004	< 0.004	< 0.004
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	0.003 J	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.002	< 0.002	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L15-SB04 23-Dec-15 N 12.5 - 13.5 ft	ERM-L16-SB01 03-Mar-16 N 0 - 1 ft	ERM-L16-SB01 07-Mar-16 N 6 - 7 ft	ERM-L16-SB01 07-Mar-16 N 9 - 10 ft	ERM-L16-SB02 03-Mar-16 N 0 - 1 ft	ERM-L16-SB02 07-Mar-16 N 7 - 8 ft	ERM-L16-SB02 07-Mar-16 N 9.5 - 10.5 ft	ERM-L16-SB03 03-Mar-16 N 0 - 1 ft	ERM-L16-SB03 07-Mar-16 N 7 - 8 ft	ERM-L16-SB03 07-Mar-16 N 9.5 - 10.5 ft	ERM-L16-SB04 03-Mar-16 N 0 - 1 ft	ERM-L16-SB04 07-Mar-16 N 7 - 8 ft	ERM-L16-SB04 07-Mar-16 N 11 - 12 ft	ERM-L17-SB01 14-Dec-15 N 0 - 1 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS														< 0.25
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.0	< 6.0	< 6.2	< 5.8	< 6.0	< 6.3	< 5.9	< 5.7	< 6.1	< 6.2	< 5.8	< 6.3	< 6.1	< 6.5
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.21	< 0.21	< 0.21	< 0.20	0.93	< 0.23	< 0.21	< 0.20	< 0.21	< 0.21	< 0.21	< 0.22	< 0.21	< 0.22
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	13,300	15,300	20,000	15,000	14,300	15,300	10,200	13,200	22,200	15,400	12,400	19,700	16,500	9,510
Antimony	mg/kg	**1,300**	190,000	NS	**27**	< 0.563	< 0.520	< 0.604	< 0.505	3.87	0.734 J	< 0.498	1.92	< 0.575	< 0.516	5.22	0.619 J	< 0.454	0.947 J
Arsenic	mg/kg	**61**	190,000	NS	**29**	5.56	6.66	6.09	4.50	**37.6**	10.1	2.54	7.86	7.12	5.86	17.5	5.79	8.49	4.50
Barium	mg/kg	190,000	190,000	NS	8,200	58.1	89.3	44.3	51.4	201	49.7	41.2	188	56.8	47.0	242	45.8	52.0	140
Beryllium	mg/kg	6,400	190,000	NS	320	0.727	0.444 J	0.673	0.492	0.809	1.12	0.617	0.634	0.750	0.891	0.613	0.805	0.835	0.598 J
Cadmium	mg/kg	1,600	190,000	NS	38	0.0970 J	0.170 J	0.687	0.516	1.82	0.949	0.419 J	0.649	0.655	0.720	0.257 J	0.845	0.665	0.463 J
Calcium	mg/kg	NS	NS	NS	NS	276	4,480	413	462	2,870	1,080	501	9,480	1,280	1,290	9,860	646	371	23,600
Chromium	mg/kg	190,000	190,000	NS	190,000	51.2	28.9	32.3	24.3	49.6	27.2	14.8	30.0	34.1	25.7	30.8	33.1	32.0	31.2
Cobalt	mg/kg	960	190,000	NS	160	4.44	4.02	4.08	3.39	8.83	8.90	4.70	6.69	4.99	7.68	9.08	5.60	10.3	5.76
Copper	mg/kg	120,000	190,000	NS	43,000	29.1	56.0	24.3	14.9	151	15.1	8.52	123	12.3	11.5	122	11.7	10.9	47.6
Iron	mg/kg	190,000	190,000	NS	NS	22,400	18,700	21,400	16,900	41,200	36,700	14,000	24,700	23,700	25,400	46,800	33,400	24,200	21,900
Lead	mg/kg	**1,000**	190,000	NS	**450**	8.33	73.7	10.3	11.3	330	9.85	5.22	167	10.7	8.50	259	11.0	8.75	135
Magnesium	mg/kg	NS	NS	NS	NS	3,340	4,240	3,190	2,560	3,380	2,620	2,400	4,110	3,150	2,940	2,800	2,970	3,180	5,880
Manganese	mg/kg	150,000	190,000	NS	**2,000**	143	102	99.1	93.4	251	295	163	264	114	309	309	157	244	268
Mercury	mg/kg	510	190,000	NS	**10**	< 0.0113	0.109 J	< 0.0116	< 0.0110	0.720	< 0.0126	< 0.0112	0.351	0.0138 J	< 0.0117	0.380	0.0175 J	< 0.0115	0.295
Nickel	mg/kg	64,000	190,000	NS	650	17.4	15.2	12.9	11.7	43.0	11.0	12.4	26.1	13.3	12.5	32.5	11.6	13.3	19.6
Potassium	mg/kg	NS	NS	NS	NS	1,900	1,550	1,900	1,440	2,150	1,740	1,430	1,980	1,670	1,500	1,690	1,630	1,670	1,740
Selenium	mg/kg	16,000	190,000	NS	26	< 0.876	< 0.809	< 0.940	< 0.785	< 0.764	< 0.771	< 0.775	< 0.664	< 0.894	< 0.803	< 0.839	< 0.891	< 0.706	1.43 J
Silver	mg/kg	16,000	190,000	NS	84	< 0.938	1.18	1.27	1.06	5.34	3.47	0.968	2.37	1.51	2.06	9.50	2.88	1.67	< 0.152
Sodium	mg/kg	NS	NS	NS	NS	83.9 J	90.2 J	77.3 J	54.7 J	119	85.3 J	50.3 J	160	187	125	181	1,910	1,680	198
Thallium	mg/kg	32	190,000	NS	**14**	1.01 J	< 0.723	< 0.839	< 0.701	< 0.682	< 0.688	< 0.692	< 0.593	< 0.798	< 0.717	1.23 J	< 0.795	< 0.631	1.62 J
Vanadium	mg/kg	**220**	190,000	NS	**820**	39.6	35.7	48.3	32.7	64.5	47.5	21.4	51.4	48.5	39.9	39.7	47.5	41.8	39.0
Zinc	mg/kg	190,000	190,000	NS	12,000	48.6	89.5	42.4	37.9	1,020	41.0	32.8	337	35.9	32.8	285	37.8	37.8	260
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0043	< 0.021	< 0.0045	< 0.0042	< 0.87	< 0.0045	< 0.0042	< 0.041	< 0.0044	< 0.0044	< 0.21	< 0.0045	< 0.0043	< 0.046
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0055	< 0.027	< 0.0057	< 0.0053	< 1.1	< 0.0058	< 0.0054	< 0.052	< 0.0056	< 0.0056	< 0.27	< 0.0057	< 0.0055	< 0.059
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.0095	< 0.048	< 0.0099	< 0.0092	< 1.9	< 0.01	< 0.0094	< 0.091	< 0.0098	< 0.0098	< 0.46	< 0.01	< 0.0096	< 0.1
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0039	< 0.02	< 0.0041	< 0.0038	< 0.8	< 0.0042	< 0.0039	< 0.037	< 0.0040	< 0.0040	< 0.19	< 0.0041	< 0.0040	< 0.042
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0039	< 0.02	< 0.0041	< 0.0038	< 0.8	< 0.0042	< 0.0039	< 0.037	< 0.0040	< 0.0040	< 0.19	< 0.0041	< 0.0040	< 0.042
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.0039	< 0.02	< 0.0041	< 0.0038	1.2 J	< 0.0042	< 0.0039	0.33	< 0.0040	< 0.0040	< 0.19	< 0.0041	< 0.0040	< 0.042
Aroclor 1260	mg/kg	**46**	190,000	NS	770	< 0.0058	0.13	< 0.0061	< 0.0057	< 1.2	< 0.0062	< 0.0058	0.58	< 0.0060	< 0.0060	< 0.28	< 0.0061	< 0.0059	2.2
Total PCBs	mg/kg	NS	NS	NS	NS	< 0.0039	0.13	< 0.0041	< 0.0038	1.2 J	< 0.0042	< 0.0039	0.92	< 0.0040	< 0.0040	< 0.19	< 0.0041	< 0.0040	2.2
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.36	< 0.36	< 0.37	< 0.35	< 1.8	< 0.38	< 0.35	< 8.6	< 0.37	< 0.37	< 1.7	< 0.37	< 0.36	< 3.9
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.079	< 0.079	< 0.082	< 0.077	< 0.4	< 0.084	< 0.078	< 1.9	< 0.081	< 0.082	< 0.39	< 0.083	< 0.08	< 0.86
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.19	< 0.008	< 0.008	< 0.039	< 0.008	< 0.008	< 0.086
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L15-SB04 23-Dec-15 N 12.5 - 13.5 ft	ERM-L16-SB01 03-Mar-16 N 0 - 1 ft	ERM-L16-SB01 07-Mar-16 N 6 - 7 ft	ERM-L16-SB01 07-Mar-16 N 9 - 10 ft	ERM-L16-SB02 03-Mar-16 N 0 - 1 ft	ERM-L16-SB02 07-Mar-16 N 7 - 8 ft	ERM-L16-SB02 07-Mar-16 N 9.5 - 10.5 ft	ERM-L16-SB03 03-Mar-16 N 0 - 1 ft	ERM-L16-SB03 07-Mar-16 N 7 - 8 ft	ERM-L16-SB03 07-Mar-16 N 9.5 - 10.5 ft	ERM-L16-SB04 03-Mar-16 N 0 - 1 ft	ERM-L16-SB04 07-Mar-16 N 7 - 8 ft	ERM-L16-SB04 07-Mar-16 N 11 - 12 ft	ERM-L17-SB01 14-Dec-15 N 0 - 1 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	< 0.004	0.015 J	< 0.004	< 0.004	0.5	< 0.004	< 0.004	0.1 J	< 0.004	< 0.004	0.34	< 0.004	< 0.004	0.095 J
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.12	< 0.12	< 0.12	< 0.12	< 0.6	< 0.13	< 0.12	< 2.9	< 0.12	< 0.12	< 0.58	< 0.12	< 0.12	< 1.3
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.079	< 0.079	< 0.082	< 0.077	< 0.4	< 0.084	< 0.078	< 1.9	< 0.081	< 0.082	< 0.39	< 0.083	< 0.08	< 0.86
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.2	< 0.2	< 0.21	< 0.19	< 1	< 0.21	< 0.19	< 4.8	< 0.2	< 0.2	< 0.97	< 0.21	< 0.2	< 2.1
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.004	0.01 J	< 0.004	< 0.004	0.039 J	< 0.004	< 0.004	< 0.095	< 0.004	< 0.004	0.61	< 0.004	< 0.004	0.29
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.004	0.03	< 0.004	< 0.004	0.1	< 0.004	< 0.004	0.13 J	< 0.004	< 0.004	0.27	< 0.004	< 0.004	0.32
Anthracene	mg/kg	190,000	190,000	NS	350	< 0.004	0.067	< 0.004	< 0.004	0.25	< 0.004	< 0.004	0.34 J	< 0.004	< 0.004	2.5	< 0.004	< 0.004	0.99
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	< 0.004	0.24	< 0.004	< 0.004	0.28	< 0.004	< 0.004	0.99	< 0.004	< 0.004	5.6	< 0.004	< 0.004	2.3
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	< 0.004	0.23	< 0.004	< 0.004	0.23	< 0.004	0.004 J	0.83	< 0.004	< 0.004	4	< 0.004	< 0.004	2.1
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	< 0.004	0.36	< 0.004	0.004 J	0.36	< 0.004	< 0.004	1.2	< 0.004	< 0.004	5.6	< 0.004	< 0.004	2.6
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	< 0.004	0.16	< 0.004	< 0.004	0.25	0.005 J	0.004 J	0.42 J	0.005 J	< 0.004	1.9	< 0.004	< 0.004	1.4
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	< 0.004	0.15	< 0.004	< 0.004	0.24	< 0.004	0.005 J	0.69	< 0.004	< 0.004	2.6	< 0.004	< 0.004	1.3
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.079	< 0.079	< 0.082	< 0.077	< 0.4	< 0.084	< 0.078	< 1.9	< 0.081	< 0.082	< 0.39	< 0.083	< 0.08	< 0.86
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.079	< 0.079	< 0.082	< 0.077	< 0.4	< 0.084	< 0.078	< 1.9	< 0.081	< 0.082	< 0.39	< 0.083	< 0.08	< 0.86
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.02	0.024 J	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	1.2	< 0.021	< 0.02	0.42 J
Chrysene	mg/kg	760	190,000	NS	230	< 0.004	0.27	< 0.004	< 0.004	0.3	< 0.004	< 0.004	1	< 0.004	< 0.004	5.8	< 0.004	< 0.004	2.5
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	< 0.004	0.042	< 0.004	< 0.004	0.067 J	< 0.004	0.004 J	0.17 J	< 0.004	< 0.004	0.65	< 0.004	< 0.004	0.37
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.02	< 0.02	< 0.021	< 0.019	0.19 J	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	0.57	< 0.021	< 0.02	< 0.21
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.079	< 0.079	< 0.082	< 0.077	< 0.4	< 0.084	< 0.078	< 1.9	< 0.081	< 0.082	< 0.39	< 0.083	< 0.08	< 0.86
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.079	< 0.079	< 0.082	< 0.077	< 0.4	< 0.084	< 0.078	< 1.9	< 0.081	< 0.082	< 0.39	< 0.083	< 0.08	< 0.86
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.079	< 0.079	< 0.082	< 0.077	< 0.4	< 0.084	< 0.078	< 1.9	< 0.081	< 0.082	< 0.39	< 0.083	< 0.08	< 0.86
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.2	< 0.2	< 0.21	< 0.19	< 1	< 0.21	< 0.19	< 4.8	< 0.2	< 0.2	< 0.97	< 0.21	< 0.2	< 2.1
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.079	< 0.079	< 0.082	< 0.077	< 0.4	< 0.084	< 0.078	< 1.9	< 0.081	< 0.082	< 0.39	< 0.083	< 0.08	< 0.86
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	< 0.004	0.37	< 0.004	< 0.004	0.42	< 0.004	< 0.004	1.7	< 0.004	< 0.004	10	< 0.004	< 0.004	4.7
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.004	0.016 J	< 0.004	< 0.004	0.049 J	< 0.004	< 0.004	0.11 J	< 0.004	< 0.004	1	< 0.004	< 0.004	0.28
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.004	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	< 0.095	< 0.004	< 0.004	< 0.019	< 0.004	< 0.004	< 0.043
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.2	< 0.2	< 0.21	< 0.19	< 1	< 0.21	< 0.19	< 4.8	< 0.2	< 0.2	< 0.97	< 0.21	< 0.2	< 2.1
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.04	< 0.04	< 0.041	< 0.039	< 0.2	< 0.042	< 0.039	< 0.95	< 0.041	< 0.041	< 0.19	< 0.041	< 0.04	< 0.43
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	< 0.004	0.15	< 0.004	< 0.004	0.21	0.004 J	0.006 J	0.47 J	< 0.004	< 0.004	2.1	< 0.004	< 0.004	1.3
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.02	< 0.02	< 0.021	0.045	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
Naphthalene	mg/kg	760	190,000	25	**25**	< 0.004	0.018 J	< 0.004	< 0.004	0.79	< 0.004	< 0.004	0.17 J	< 0.004	< 0.004	0.37	< 0.004	< 0.004	0.16 J
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.04	< 0.04	< 0.041	< 0.039	< 0.2	< 0.042	< 0.039	< 0.95	< 0.041	< 0.041	< 0.19	< 0.041	< 0.04	< 0.43
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.04	< 0.04	< 0.041	< 0.039	< 0.2	< 0.042	< 0.039	< 0.95	< 0.041	< 0.041	< 0.19	< 0.041	< 0.04	< 0.43
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	< 0.004	0.2	< 0.004	< 0.004	0.48	< 0.004	< 0.004	1.2	< 0.004	< 0.004	10	< 0.004	< 0.004	3.3
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.02	< 0.02	< 0.021	< 0.019	< 0.1	< 0.021	< 0.019	< 0.48	< 0.02	< 0.02	< 0.097	< 0.021	< 0.02	< 0.21
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.079	< 0.079	< 0.082	< 0.077	< 0.4	< 0.084	< 0.078	< 1.9	< 0.081	< 0.082	< 0.39	< 0.083	< 0.08	< 0.86
Pyrene	mg/kg	96,000	190,000	NS	2,200	< 0.004	0.32	< 0.004	< 0.004	0.38	< 0.004	< 0.004	1.4	< 0.004	< 0.004	8.5	< 0.004	< 0.004	4.3
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.005	< 0.005	< 0.004	< 0.003	< 0.005	< 0.004	< 0.003	< 0.005	< 0.004	< 0.004	0.007 J	0.006 J	< 0.004	< 0.005

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L15-SB04 23-Dec-15 N 12.5 - 13.5 ft	ERM-L16-SB01 03-Mar-16 N 0 - 1 ft	ERM-L16-SB01 07-Mar-16 N 6 - 7 ft	ERM-L16-SB01 07-Mar-16 N 9 - 10 ft	ERM-L16-SB02 03-Mar-16 N 0 - 1 ft	ERM-L16-SB02 07-Mar-16 N 7 - 8 ft	ERM-L16-SB02 07-Mar-16 N 9.5 - 10.5 ft	ERM-L16-SB03 03-Mar-16 N 0 - 1 ft	ERM-L16-SB03 07-Mar-16 N 7 - 8 ft	ERM-L16-SB03 07-Mar-16 N 9.5 - 10.5 ft	ERM-L16-SB04 03-Mar-16 N 0 - 1 ft	ERM-L16-SB04 07-Mar-16 N 7 - 8 ft	ERM-L16-SB04 07-Mar-16 N 11 - 12 ft	ERM-L17-SB01 14-Dec-15 N 0 - 1 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.004	< 0.003	< 0.003	< 0.004	< 0.003	< 0.002	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.004	< 0.003	< 0.003	< 0.004	< 0.003	< 0.002	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.008	0.021 J	< 0.007	< 0.006	< 0.009	< 0.007	< 0.006	0.021 J	0.02	0.014 J	0.03	0.032	0.027	< 0.008
Benzene	mg/kg	290	330	0.13	0.5	< 0.0006	< 0.0006	< 0.0005	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0006	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005	< 0.0006
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	0.002 J	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	0.002 J	< 0.0009	< 0.0009	0.006	0.006	0.012	< 0.001
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.0009	0.001 J	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Ethanol	mg/kg	NS	NS	NS	NS	< 0.12	< 0.12	< 0.093	< 0.084	< 0.13	< 0.1	< 0.081	< 0.12	< 0.091	< 0.091	< 0.11	< 0.097	< 0.098	0.19 J
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	0.003 J
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.13	< 0.14	< 0.1	< 0.092	< 0.14	< 0.11	< 0.089	< 0.13	< 0.1	< 0.1	< 0.12	< 0.11	< 0.11	< 0.13
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.005	< 0.005	< 0.004	< 0.003	< 0.005	< 0.004	< 0.003	< 0.005	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.005
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	0.016

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L17-SB01 22-Dec-15 N 8 - 9 ft	ERM-L17-SB01 22-Dec-15 N 15 - 16 ft	ERM-L17-SB02 15-Dec-15 N 0 - 1 ft	ERM-L17-SB02 22-Dec-15 N 7 - 8 ft	ERM-L17-SB02 22-Dec-15 N 13.5 - 14.5 ft	ERM-L17-SB03 14-Dec-15 N 0 - 1 ft	ERM-L17-SB04 14-Dec-15 N 0 - 1 ft	ERM-L17-SB04 23-Dec-15 N 6 - 7 ft	ERM-L17-SB04 23-Dec-15 N 14 - 15 ft	ERM-L17-SB05 14-Dec-15 N 0 - 1 ft	ERM-L17-SB05 13-Jan-16 N 6.5 - 7.5 ft	ERM-L17-SB06 14-Dec-15 N 0 - 1 ft	ERM-L17-SB06 14-Jan-16 N 7 - 8 ft	ERM-L17-SB06 14-Jan-16 N 11 - 12 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS			< 0.25			0.25					< 0.25			
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected		None Detected	None Detected		None Detected	None Detected	None Detected	None Detected		None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.3	< 7.5	< 6.2	< 6.0	< 6.1	< 7.5	< 6.2	< 6.2	< 5.4	< 6.6	< 6.9	< 6.1	< 6.3	< 6.1
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.22	< 0.26	0.23 J	< 0.21	< 0.22	< 0.26	0.22 J	< 0.22	< 0.19	< 0.23	< 0.25	< 0.22	< 0.23	< 0.22
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	14,500	20,600	9,200	13,600	14,300	19,200	12,100	17,200	5,560	17,100	14,100	15,700	22,000	14,600
Antimony	mg/kg	**1,300**	190,000	NS	**27**	4.73 J	< 0.612	10.8	< 0.620	< 0.662	< 0.590	24.9	< 0.643	< 0.397	< 2.62	< 0.669	< 2.48	0.822 J	< 0.602
Arsenic	mg/kg	**61**	190,000	NS	**29**	4.02	4.05	4.54	9.25	9.83	5.53	**35.3**	8.35	2.01	21.3	21.8	**48.6**	8.61	8.48
Barium	mg/kg	190,000	190,000	NS	8,200	47.8	67.8	354	93.1	121	345	141	51.0	26.6	507	450	177	59.3	44.8
Beryllium	mg/kg	6,400	190,000	NS	320	1.53	0.946	0.756	1.53	0.993	1.54	0.793	1.15	0.307 J	0.944	0.950	0.918	1.29	0.904
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.0428	0.0646 J	2.03	1.34	1.86	2.02	1.84	0.124 J	0.107 J	1.74	5.06	4.87	< 0.0467	< 0.0546
Calcium	mg/kg	NS	NS	NS	NS	995	1,550	34,200	1,550	4,930	103,000	16,300	841	146	12,500	11,400	10,500	691	332
Chromium	mg/kg	190,000	190,000	NS	190,000	29.5	38.4	90.8	31.3	35.3	43.0	35.4	32.1	10.4	46.5	46.8	88.2	40.0	27.4
Cobalt	mg/kg	960	190,000	NS	160	6.81	7.42	13.2	9.08	7.45	6.85	6.73	7.95	10.2	9.78	10.1	24.8	7.96	5.73
Copper	mg/kg	120,000	190,000	NS	43,000	26.5	25.3	197	102	173	105	441	33.1	9.00	130	140	192	14.1	12.9
Iron	mg/kg	190,000	190,000	NS	NS	42,800	21,700	54,800	31,100	31,300	27,700	31,500	31,700	8,910	32,100	65,700	48,600	38,200	19,300
Lead	mg/kg	**1,000**	190,000	NS	**450**	16.0	16.2	**1,950**	88.8	199	274	**792**	10.8	3.45	197	262	283	9.87	6.71
Magnesium	mg/kg	NS	NS	NS	NS	2,690	3,530	5,560	3,940	2,970	39,100	4,910	3,660	1,100	7,750	5,700	9,330	3,680	2,650
Manganese	mg/kg	150,000	190,000	NS	**2,000**	365	191	542	286	259	597	285	249	519	357	655	417	183	106
Mercury	mg/kg	510	190,000	NS	**10**	0.0269 J	0.0364 J	1.24	0.276	0.152	1.22	0.939	0.0161 J	< 0.0107	0.643	0.979	0.558	0.0147 J	< 0.0121
Nickel	mg/kg	64,000	190,000	NS	650	12.7	18.3	40.0	285	38.9	31.2	37.8	14.3	8.88	48.1	54.4	72.6	16.2	13.7
Potassium	mg/kg	NS	NS	NS	NS	1,400	1,820	2,320	3,160	2,070	3,310	1,550	1,850	545	3,040	2,400	3,010	2,120	1,300
Selenium	mg/kg	16,000	190,000	NS	26	5.29 J	< 4.76	13.7	< 0.964	< 1.03	< 1.19	1.33 J	< 1.00	< 0.618	1.41 J	< 1.04	1.85 J	3.68	< 0.936
Silver	mg/kg	16,000	190,000	NS	84	< 0.157	< 1.02	1.88	< 0.207	< 0.221	0.452 J	0.412 J	< 1.07	< 0.132	0.619 J	0.399 J	0.650	1.80	0.417 J
Sodium	mg/kg	NS	NS	NS	NS	6,540	7,990	383	129	239	469	170	70.6 J	94.8	233	199	295	1,920	1,190
Thallium	mg/kg	32	190,000	NS	**14**	1.23 J	1.63 J	< 0.919	1.36 J	< 0.919	< 1.08	< 0.917	2.06 J	0.704 J	1.45 J	3.14 J	1.22 J	2.94	1.79 J
Vanadium	mg/kg	**220**	190,000	NS	**820**	34.6	38.8	39.9	41.6	41.3	37.8	51.5	55.6	12.2	64.4	54.7	85.6	51.6	39.6
Zinc	mg/kg	190,000	190,000	NS	12,000	73.3	63.6	1,280	191	300	374	500	42.8	17.5	444	1,540	798	47.6	33.3
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0045	< 0.0054	< 4.4	< 0.0043	< 0.44	< 0.53	< 4.4	< 0.0044	< 0.0039	< 0.47	< 0.49	< 0.087	< 0.0045	< 0.0043
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0057	< 0.0069	< 5.7	< 0.0054	< 0.56	< 0.68	< 5.6	< 0.0057	< 0.0050	< 0.6	< 0.62	< 0.11	< 0.0058	< 0.0056
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.0099	< 0.012	< 9.8	< 0.0095	< 0.97	< 1.2	< 9.8	< 0.0099	< 0.0086	< 1	< 1.1	< 0.19	< 0.01	< 0.0097
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0041	< 0.0049	< 4.1	< 0.0039	< 0.4	< 0.49	< 4	< 0.0041	< 0.0036	< 0.43	< 0.45	< 0.08	< 0.0041	< 0.0040
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0041	< 0.0049	< 4.1	< 0.0039	< 0.4	< 0.49	< 4	< 0.0041	< 0.0036	< 0.43	< 0.45	< 0.08	< 0.0041	< 0.0040
Aroclor 1254	mg/kg	46	10,000	NS	340	0.091	< 0.0049	< 4.1	< 0.0039	< 0.4	30	< 4	< 0.0041	< 0.0036	< 0.43	< 0.45	3.4	< 0.0041	< 0.0040
Aroclor 1260	mg/kg	**46**	190,000	NS	770	0.034	0.016 J	**190**	0.021	18	24	**130**	0.026	< 0.0053	14	9.9	< 0.12	< 0.0062	< 0.0059
Total PCBs	mg/kg	NS	NS	NS	NS	0.13	0.016 J	190	0.021	18	54	130	0.026	< 0.0036	14	9.9	3.4	< 0.0041	< 0.0040
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.021	< 0.025	< 1	< 0.02	**130**	< 0.25	0.36 J	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.021	< 0.025	< 1	< 0.02	1.2	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.021	< 0.025	< 1	< 0.02	0.29	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.021	< 0.025	< 1	< 0.02	1.8	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.38	< 0.45	< 18	< 0.35	< 0.36	< 4.5	< 3.7	< 0.37	< 0.32	< 3.9	< 2	< 3.6	< 0.37	< 0.36
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.083	< 0.099	< 4.1	< 0.079	< 0.081	< 1	< 0.82	< 0.082	< 0.072	< 0.87	< 0.45	< 0.8	< 0.083	< 0.08
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.008	< 0.01	< 0.41	< 0.008	< 0.008	< 0.1	< 0.082	< 0.008	< 0.007	< 0.088	< 0.045	< 0.08	< 0.008	< 0.008
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L17-SB01 22-Dec-15 N 8 - 9 ft	ERM-L17-SB01 22-Dec-15 N 15 - 16 ft	ERM-L17-SB02 15-Dec-15 N 0 - 1 ft	ERM-L17-SB02 22-Dec-15 N 7 - 8 ft	ERM-L17-SB02 22-Dec-15 N 13.5 - 14.5 ft	ERM-L17-SB03 14-Dec-15 N 0 - 1 ft	ERM-L17-SB04 14-Dec-15 N 0 - 1 ft	ERM-L17-SB04 23-Dec-15 N 6 - 7 ft	ERM-L17-SB04 23-Dec-15 N 14 - 15 ft	ERM-L17-SB05 14-Dec-15 N 0 - 1 ft	ERM-L17-SB05 13-Jan-16 N 6.5 - 7.5 ft	ERM-L17-SB06 14-Dec-15 N 0 - 1 ft	ERM-L17-SB06 14-Jan-16 N 7 - 8 ft	ERM-L17-SB06 14-Jan-16 N 11 - 12 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	0.004 J	< 0.005	0.46 J	0.053	0.047	0.051 J	0.17 J	< 0.004	0.005 J	0.13 J	0.17	0.13 J	< 0.004	< 0.004
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.13	< 0.15	< 6.1	< 0.12	< 0.12	< 1.5	< 1.2	< 0.12	< 0.11	< 1.3	< 0.68	< 1.2	< 0.12	< 0.12
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.083	< 0.099	< 4.1	< 0.079	< 0.081	< 1	< 0.82	< 0.082	< 0.072	< 0.87	< 0.45	< 0.8	< 0.083	< 0.08
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.21	< 0.25	< 10	< 0.2	< 0.2	< 2.5	< 2	< 0.2	< 0.18	< 2.2	< 1.1	< 2	< 0.21	< 0.2
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	0.005 J	< 0.005	0.78 J	0.009 J	< 0.004	0.064 J	0.15 J	< 0.004	< 0.004	0.098 J	0.047 J	0.17 J	< 0.004	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.004	< 0.005	0.48 J	0.01 J	< 0.004	0.1 J	0.59	< 0.004	< 0.004	0.23	0.11 J	0.29	< 0.004	< 0.004
Anthracene	mg/kg	190,000	190,000	NS	350	0.015 J	< 0.005	2	0.021	0.037	0.24 J	1.3	< 0.004	< 0.004	0.46	0.24	0.62	< 0.004	< 0.004
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.041	< 0.005	6.2	0.044	0.091	0.72	2.2	< 0.004	< 0.004	0.95	0.55	1.6	< 0.004	< 0.004
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.046	< 0.005	5.5	0.032	0.082	0.81	2.2	< 0.004	< 0.004	0.9	0.7	2	< 0.004	< 0.004
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.057	< 0.005	7.4	0.067	0.14	1	4.4	< 0.004	< 0.004	1.5	1.1	2.8	< 0.004	< 0.004
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.034	< 0.005	4.1	0.042	0.07	1.2	1.6	< 0.004	< 0.004	0.61	0.57	1.9	< 0.004	< 0.004
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.03	< 0.005	4.2	0.024	0.03	0.39	1.7	< 0.004	< 0.004	0.54	0.51	1.2	< 0.004	< 0.004
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.083	< 0.099	< 4.1	< 0.079	< 0.081	< 1	< 0.82	< 0.082	< 0.072	< 0.87	< 0.45	< 0.8	< 0.083	< 0.08
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.083	< 0.099	< 4.1	< 0.079	< 0.081	< 1	< 0.82	< 0.082	< 0.072	< 0.87	< 0.45	< 0.8	< 0.083	< 0.08
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.021	< 0.025	1.3 J	< 0.02	< 0.02	< 0.25	0.36 J	< 0.02	< 0.018	< 0.22	0.12 J	0.3 J	< 0.021	< 0.02
Chrysene	mg/kg	760	190,000	NS	230	0.036	< 0.005	6.2	0.068	0.13	0.87	2.7	< 0.004	< 0.004	1.1	0.81	2	< 0.004	< 0.004
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.011 J	< 0.005	0.99 J	0.012 J	0.018 J	0.2 J	0.47	< 0.004	< 0.004	0.21 J	0.14	0.47	< 0.004	< 0.004
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.021	< 0.025	< 1	0.02 J	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.083	< 0.099	< 4.1	< 0.079	< 0.081	< 1	< 0.82	< 0.082	< 0.072	< 0.87	< 0.45	< 0.8	< 0.083	< 0.08
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.083	< 0.099	< 4.1	< 0.079	< 0.081	< 1	< 0.82	< 0.082	< 0.072	< 0.87	< 0.45	< 0.8	< 0.083	< 0.08
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.083	< 0.099	< 4.1	< 0.079	< 0.081	< 1	< 0.82	< 0.082	< 0.072	< 0.87	< 0.45	< 0.8	< 0.083	< 0.08
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.21	< 0.25	< 10	< 0.2	< 0.2	< 2.5	< 2	< 0.2	< 0.18	< 2.2	< 1.1	< 2	< 0.21	< 0.2
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.083	< 0.099	< 4.1	< 0.079	< 0.081	< 1	< 0.82	< 0.082	< 0.072	< 0.87	< 0.45	< 0.8	< 0.083	< 0.08
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.075	0.007 J	14	0.086	0.19	1.4	3.2	< 0.004	< 0.004	1.6	1.1	3.3	< 0.004	< 0.004
Fluorene	mg/kg	130,000	190,000	NS	3,800	0.006 J	< 0.005	0.69 J	0.008 J	0.017 J	0.064 J	0.17 J	< 0.004	< 0.004	0.12 J	0.068 J	0.11 J	< 0.004	< 0.004
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.005	< 0.2	< 0.004	0.22	< 0.05	0.055 J	< 0.004	< 0.004	< 0.044	< 0.023	< 0.04	< 0.004	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.21	< 0.25	< 10	< 0.2	< 0.2	< 2.5	< 2	< 0.2	< 0.18	< 2.2	< 1.1	< 2	< 0.21	< 0.2
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.042	< 0.05	< 2	< 0.039	< 0.04	< 0.5	< 0.41	< 0.041	< 0.036	< 0.44	< 0.23	< 0.4	< 0.041	< 0.04
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.03	< 0.005	2.9	0.033	0.048	0.49	1.6	< 0.004	< 0.004	0.59	0.55	1.7	< 0.004	< 0.004
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
Naphthalene	mg/kg	760	190,000	25	**25**	0.01 J	0.006 J	0.8 J	0.042	0.038	0.058 J	0.22	< 0.004	0.022	0.18 J	0.2	0.25	< 0.004	< 0.004
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.021	< 0.025	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.042	< 0.05	< 2	< 0.039	< 0.04	< 0.5	< 0.41	< 0.041	< 0.036	< 0.44	< 0.23	< 0.4	< 0.041	< 0.04
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.021	0.17	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	0.14 J	< 0.2	< 0.021	< 0.02
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.042	< 0.05	< 2	< 0.039	< 0.04	< 0.5	< 0.41	< 0.041	< 0.036	< 0.44	< 0.23	< 0.4	< 0.041	< 0.04
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.058	0.005 J	12	0.077	0.12	0.88	1.3	< 0.004	0.007 J	1.2	0.74	1.4	< 0.004	< 0.004
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.021	0.038 J	< 1	< 0.02	< 0.02	< 0.25	< 0.2	< 0.02	< 0.018	< 0.22	< 0.11	< 0.2	< 0.021	< 0.02
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.083	< 0.099	< 4.1	< 0.079	< 0.081	< 1	< 0.82	< 0.082	< 0.072	< 0.87	< 0.45	< 0.8	< 0.083	< 0.08
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.085	0.008 J	12	0.079	0.18	1.4	3.2	0.005 J	< 0.004	1.4	1.2	3.2	< 0.004	< 0.004
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.004	0.018	< 0.005	< 0.004	< 0.004	< 0.008	< 0.005	< 0.004	< 0.004	< 0.005	< 0.55	< 0.005	< 0.004	< 0.004

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L17-SB01 22-Dec-15 N 8 - 9 ft	ERM-L17-SB01 22-Dec-15 N 15 - 16 ft	ERM-L17-SB02 15-Dec-15 N 0 - 1 ft	ERM-L17-SB02 22-Dec-15 N 7 - 8 ft	ERM-L17-SB02 22-Dec-15 N 13.5 - 14.5 ft	ERM-L17-SB03 14-Dec-15 N 0 - 1 ft	ERM-L17-SB04 14-Dec-15 N 0 - 1 ft	ERM-L17-SB04 23-Dec-15 N 6 - 7 ft	ERM-L17-SB04 23-Dec-15 N 14 - 15 ft	ERM-L17-SB05 14-Dec-15 N 0 - 1 ft	ERM-L17-SB05 13-Jan-16 N 6.5 - 7.5 ft	ERM-L17-SB06 14-Dec-15 N 0 - 1 ft	ERM-L17-SB06 14-Jan-16 N 7 - 8 ft	ERM-L17-SB06 14-Jan-16 N 11 - 12 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.004	< 0.004	< 0.003	< 0.003	< 0.006	< 0.004	< 0.003	< 0.003	< 0.004	< 0.41	< 0.004	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.004	< 0.004	< 0.003	< 0.003	< 0.006	< 0.004	< 0.003	< 0.003	< 0.004	< 0.41	< 0.004	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.01 J	0.15	< 0.008	< 0.007	0.019	< 0.013	< 0.009	< 0.006	< 0.006	< 0.008	< 0.96	< 0.008	0.011 J	0.017 J
Benzene	mg/kg	290	330	0.13	0.5	< 0.0005	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.001	< 0.0006	< 0.0005	< 0.0004	< 0.0006	< 0.069	< 0.0006	< 0.0005	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	0.01	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.001	< 0.001	0.015	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.004	< 0.003	< 0.002	< 0.002	< 0.002	< 0.28	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Ethanol	mg/kg	NS	NS	NS	NS	< 0.099	< 0.12	< 0.12	< 0.1	< 0.092	0.43 J	< 0.13	< 0.091	< 0.089	< 0.12	< 14	< 0.12	< 0.097	< 0.091
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.004	< 0.003	< 0.002	< 0.002	< 0.002	< 0.28	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.004	< 0.003	< 0.002	< 0.002	< 0.002	< 0.28	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.004	< 0.003	< 0.002	< 0.002	< 0.002	< 0.28	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.004	< 0.003	< 0.002	< 0.002	< 0.002	< 0.28	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.11	< 0.13	< 0.13	< 0.11	< 0.1	< 0.21	< 0.14	< 0.1	< 0.098	< 0.13	< 15	< 0.13	< 0.11	< 0.1
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.004	< 0.005	< 0.005	< 0.004	< 0.004	< 0.008	< 0.005	< 0.004	< 0.004	< 0.005	< 0.55	< 0.005	< 0.004	< 0.004
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	< 0.001	< 0.001	< 0.0009
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.14	0.001 J	< 0.001	< 0.0009

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L18-SB01 03-Mar-16 N 0 - 1 ft	ERM-L18-SB01 08-Mar-16 N 5 - 6 ft	ERM-L18-SB02 03-Mar-16 N 0 - 1 ft	ERM-L18-SB02 07-Mar-16 N 0 - 1 ft	ERM-L18-SB02 07-Mar-16 N 6 - 7 ft	ERM-L18-SB02 07-Mar-16 N 8 - 9 ft	ERM-L18-SB03 04-Mar-16 N 0 - 1 ft	ERM-L18-SB03 08-Mar-16 N 7 - 8 ft	ERM-L18-SB03 08-Mar-16 N 10 - 11 ft	ERM-L18-SB04 03-Mar-16 N 0 - 1 ft	ERM-L18-SB04 08-Mar-16 N 9 - 10 ft	ERM-L18-SB04 08-Mar-16 N 15 - 16 ft	ERM-L19-SB01 03-Mar-16 N 0 - 1 ft	ERM-L19-SB01 07-Mar-16 N 7 - 8 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS							0.25							
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected		None Detected	None Detected		None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 5.9	< 6.4	< 6.1		< 6.0	< 6.2	< 6.3	< 6.1	< 6.1	< 6.0	< 6.2	< 5.8	< 5.6	< 5.6
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.21	< 0.22	< 0.22		< 0.22	0.79	< 0.22	< 0.22	< 0.21	< 0.21	< 0.22	< 0.20	< 0.20	< 0.19
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	12,300	12,900	16,000		15,400	11,700	12,700	14,900	15,500	15,700	18,300	13,700	13,600	15,200
Antimony	mg/kg	**1,300**	190,000	NS	**27**	1.63 J	0.978 J	1.81		< 0.585	< 0.533	3.19	0.769 J	0.724 J	0.953 J	0.670 J	0.787 J	< 0.445	1.48 J
Arsenic	mg/kg	**61**	190,000	NS	**29**	6.73	3.89	8.83		3.79	4.65	11.9	3.69	4.85	18.3	5.28	4.98	3.88	2.11
Barium	mg/kg	190,000	190,000	NS	8,200	167	64.3	122		111	54.1	948	35.5	45.2	143	48.1	50.7	332	242
Beryllium	mg/kg	6,400	190,000	NS	320	0.715	0.715	0.835		0.772	0.695	0.492	0.567 J	0.714	0.972	0.706	0.725	0.363 J	0.362 J
Cadmium	mg/kg	1,600	190,000	NS	38	1.36	0.540 J	0.658		0.534 J	0.586	2.38	0.365 J	0.261 J	2.67	0.226 J	0.291 J	0.722	0.945
Calcium	mg/kg	NS	NS	NS	NS	7,330	7,410	2,340		1,360	909	7,560	1,940	454	3,990	643	710	56,700	4,120
Chromium	mg/kg	190,000	190,000	NS	190,000	29.5	20.9	31.5		27.9	22.3	48.7	27.0	25.9	31.1	31.2	24.1	63.2	68.6
Cobalt	mg/kg	960	190,000	NS	160	8.84	7.42	7.99		5.60	8.02	5.52	5.86	5.79	8.65	5.55	7.17	9.32	12.0
Copper	mg/kg	120,000	190,000	NS	43,000	115	17.2	76.4		11.8	11.0	234	11.3	11.5	120	11.5	9.59	122	45.6
Iron	mg/kg	190,000	190,000	NS	NS	45,800	17,000	23,000		17,000	17,700	27,500	22,200	20,200	22,500	27,900	26,000	26,900	28,300
Lead	mg/kg	**1,000**	190,000	NS	**450**	152	35.3	140		10.9	8.24	206	8.56	7.72	136	9.86	7.70	74.0	5.69
Magnesium	mg/kg	NS	NS	NS	NS	4,350	2,200	2,940		3,290	2,680	3,560	3,280	3,160	3,330	2,740	2,490	34,200	8,330
Manganese	mg/kg	150,000	190,000	NS	**2,000**	314	230	268		138	169	420	207	149	341	116	140	293	262
Mercury	mg/kg	510	190,000	NS	**10**	0.517	0.0795 J	0.795		0.0381 J	0.0475 J	0.744	< 0.0117	< 0.0117	0.289	0.0171 J	< 0.0114	0.777	0.0188 J
Nickel	mg/kg	64,000	190,000	NS	650	28.5	11.4	30.5		12.7	11.2	38.6	13.7	13.1	20.3	11.1	12.5	30.1	34.1
Potassium	mg/kg	NS	NS	NS	NS	1,710	1,020	1,590		1,560	1,330	2,340	1,630	1,670	1,370	1,440	1,220	5,060	7,110
Selenium	mg/kg	16,000	190,000	NS	26	< 0.864	< 0.948	< 0.724		< 0.911	< 0.830	< 0.753	< 0.996	< 0.715	< 0.719	0.827 J	< 0.766	< 0.693	< 0.713
Silver	mg/kg	16,000	190,000	NS	84	7.47	0.447 J	2.35		0.954	1.05	3.78	1.54	0.823	2.22	2.00	1.82	1.99	2.07
Sodium	mg/kg	NS	NS	NS	NS	176	209	247		448	369	513	405	579	113	103	62.1 J	193	144
Thallium	mg/kg	32	190,000	NS	**14**	0.992 J	< 0.847	< 0.646		< 0.813	< 0.741	< 0.672	< 0.889	< 0.638	< 0.642	< 0.626	< 0.684	< 0.619	< 0.636
Vanadium	mg/kg	**220**	190,000	NS	**820**	40.7	25.7	36.5		34.0	30.6	42.4	39.2	40.6	41.4	42.3	39.5	56.1	62.7
Zinc	mg/kg	190,000	190,000	NS	12,000	398	78.3	421		43.8	33.5	499	45.0	34.5	413	36.2	42.7	297	99.3
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.021	< 0.0046	< 0.043		< 0.0043	< 0.0044	< 0.023	< 0.0044	< 0.0043	< 0.21	< 0.0044	< 0.0042	< 0.041	< 0.0040
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.027	< 0.0058	< 0.056		< 0.0055	< 0.0057	< 0.029	< 0.0056	< 0.0055	< 0.27	< 0.0057	< 0.0053	< 0.052	< 0.0052
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.047	< 0.01	< 0.097		< 0.0095	< 0.0099	< 0.05	< 0.0097	< 0.0096	< 0.47	< 0.0098	< 0.0092	< 0.09	< 0.0090
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.019	< 0.0042	< 0.04		< 0.0039	< 0.0041	< 0.021	< 0.0040	< 0.0040	< 0.2	< 0.0041	< 0.0038	< 0.037	< 0.0037
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.019	< 0.0042	< 0.04		< 0.0039	< 0.0041	< 0.021	0.0071 J	< 0.0040	< 0.2	< 0.0041	< 0.0038	< 0.037	< 0.0037
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.019	< 0.0042	< 0.04		< 0.0039	< 0.0041	< 0.021	< 0.0040	< 0.0040	< 0.2	< 0.0041	< 0.0038	< 0.037	< 0.0037
Aroclor 1260	mg/kg	**46**	190,000	NS	770	0.16	0.0080 J	< 0.059		< 0.0058	< 0.0060	1.3	< 0.0060	< 0.0059	< 0.29	< 0.0060	< 0.0057	2	< 0.0055
Total PCBs	mg/kg	NS	NS	NS	NS	0.16	0.0080 J	< 0.04		< 0.0039	< 0.0041	1.3	0.0071 J	< 0.0040	< 0.2	< 0.0041	< 0.0038	2	< 0.0037
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 1.8	< 0.38	< 0.36		< 0.36	< 0.37	< 0.37	< 0.36	< 0.36	< 1.8	< 0.37	< 0.34	< 8.4	< 0.33
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.39	< 0.084	< 0.081		< 0.08	< 0.081	< 0.083	< 0.081	< 0.08	< 0.39	< 0.081	< 0.076	< 1.9	< 0.074
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.039	< 0.008	0.009 J		< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.039	< 0.008	< 0.008	< 0.19	< 0.007
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L18-SB01 03-Mar-16 N 0 - 1 ft	ERM-L18-SB01 08-Mar-16 N 5 - 6 ft	ERM-L18-SB02 03-Mar-16 N 0 - 1 ft	ERM-L18-SB02 07-Mar-16 N 0 - 1 ft	ERM-L18-SB02 07-Mar-16 N 6 - 7 ft	ERM-L18-SB02 07-Mar-16 N 8 - 9 ft	ERM-L18-SB03 04-Mar-16 N 0 - 1 ft	ERM-L18-SB03 08-Mar-16 N 7 - 8 ft	ERM-L18-SB03 08-Mar-16 N 10 - 11 ft	ERM-L18-SB04 03-Mar-16 N 0 - 1 ft	ERM-L18-SB04 08-Mar-16 N 9 - 10 ft	ERM-L18-SB04 08-Mar-16 N 15 - 16 ft	ERM-L19-SB01 03-Mar-16 N 0 - 1 ft	ERM-L19-SB01 07-Mar-16 N 7 - 8 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	0.046 J	0.13	0.048		< 0.004	< 0.004	0.19	< 0.004	< 0.004	0.035 J	< 0.004	< 0.004	< 0.093	< 0.004
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.59	< 0.13	< 0.12		< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.59	< 0.12	< 0.11	< 2.8	< 0.11
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.39	< 0.084	< 0.081		< 0.08	< 0.081	< 0.083	< 0.081	< 0.08	< 0.39	< 0.081	< 0.076	< 1.9	< 0.074
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.98	< 0.21	< 0.2		< 0.2	< 0.2	< 0.21	< 0.2	< 0.2	< 0.99	< 0.2	< 0.19	< 4.7	< 0.19
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	0.031 J	0.093	0.008 J		0.005 J	0.004 J	0.066	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	< 0.093	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	0.05 J	0.011 J	0.025		0.004 J	< 0.004	0.045	< 0.004	< 0.004	0.031 J	< 0.004	< 0.004	< 0.093	0.004 J
Anthracene	mg/kg	190,000	190,000	NS	350	0.11	0.13	0.036		0.006 J	< 0.004	0.23	< 0.004	< 0.004	0.055 J	< 0.004	< 0.004	< 0.093	0.006 J
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.6	0.11	0.06		0.011 J	0.005 J	0.75	< 0.004	< 0.004	0.21	< 0.004	< 0.004	0.17 J	0.022
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.56	0.11	0.061		0.009 J	0.006 J	0.66	< 0.004	< 0.004	0.16	< 0.004	< 0.004	0.23 J	0.022
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.84	0.17	0.13		0.013 J	0.006 J	0.99	< 0.004	< 0.004	0.24	< 0.004	< 0.004	0.3 J	0.032
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.38	0.065	0.065		0.011 J	< 0.004	0.47	< 0.004	< 0.004	0.13	< 0.004	< 0.004	0.24 J	0.023
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.29	0.063	0.048		0.009 J	0.006 J	0.43	< 0.004	< 0.004	0.13	< 0.004	< 0.004	0.14 J	0.013 J
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.39	< 0.084	< 0.081		< 0.08	< 0.081	< 0.083	< 0.081	< 0.08	< 0.39	< 0.081	< 0.076	< 1.9	< 0.074
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.39	< 0.084	< 0.081		< 0.08	< 0.081	1.3	< 0.081	< 0.08	< 0.39	< 0.081	< 0.076	< 1.9	< 0.074
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.098	0.095	< 0.02		< 0.02	< 0.02	0.13	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
Chrysene	mg/kg	760	190,000	NS	230	0.72	0.16	0.093		0.01 J	0.005 J	0.85	< 0.004	< 0.004	0.22	< 0.004	< 0.004	0.24 J	0.024
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.1	0.017 J	0.026		0.005 J	0.008 J	0.14	< 0.004	< 0.004	0.057 J	< 0.004	< 0.004	< 0.093	0.008 J
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.098	0.21	< 0.02		< 0.02	< 0.02	0.09	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.39	< 0.084	< 0.081		< 0.08	< 0.081	0.094 J	< 0.081	< 0.08	< 0.39	< 0.081	< 0.076	< 1.9	< 0.074
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.39	< 0.084	< 0.081		< 0.08	< 0.081	< 0.083	< 0.081	< 0.08	< 0.39	< 0.081	< 0.076	< 1.9	< 0.074
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.39	< 0.084	< 0.081		< 0.08	< 0.081	0.087 J	< 0.081	< 0.08	< 0.39	< 0.081	< 0.076	< 1.9	< 0.074
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.98	< 0.21	< 0.2		< 0.2	< 0.2	< 0.21	< 0.2	< 0.2	< 0.99	< 0.2	< 0.19	< 4.7	< 0.19
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.39	< 0.084	< 0.081		< 0.08	< 0.081	< 0.083	< 0.081	< 0.08	< 0.39	< 0.081	< 0.076	< 1.9	< 0.074
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.9	0.29	0.12		0.009 J	< 0.004	1.5	< 0.004	< 0.004	0.34	< 0.004	< 0.004	0.28 J	0.024
Fluorene	mg/kg	130,000	190,000	NS	3,800	0.03 J	0.15	0.01 J		0.007 J	< 0.004	0.082	< 0.004	< 0.004	0.024 J	< 0.004	< 0.004	< 0.093	< 0.004
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.02	< 0.004	< 0.004		< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	< 0.093	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.98	< 0.21	< 0.2		< 0.2	< 0.2	< 0.21	< 0.2	< 0.2	< 0.99	< 0.2	< 0.19	< 4.7	< 0.19
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.2	< 0.042	< 0.04		< 0.04	< 0.041	< 0.042	< 0.04	< 0.04	< 0.2	< 0.041	< 0.038	< 0.93	< 0.037
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.33	0.058	0.056		0.008 J	0.007 J	0.44	< 0.004	< 0.004	0.11	< 0.004	< 0.004	0.22 J	0.017 J
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
Naphthalene	mg/kg	760	190,000	25	**25**	0.063 J	0.36	0.042		< 0.004	< 0.004	0.15	< 0.004	< 0.004	0.032 J	< 0.004	0.008 J	< 0.093	< 0.004
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	< 0.021	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.2	< 0.042	< 0.04		< 0.04	< 0.041	< 0.042	< 0.04	< 0.04	< 0.2	< 0.041	< 0.038	< 0.93	< 0.037
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.098	0.026 J	< 0.02		< 0.02	< 0.02	0.021 J	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.2	< 0.042	< 0.04		< 0.04	< 0.041	< 0.042	< 0.04	< 0.04	< 0.2	< 0.041	< 0.038	< 0.93	< 0.037
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.51	0.39	0.071		0.008 J	< 0.004	1.1	< 0.004	< 0.004	0.26	< 0.004	< 0.004	0.1 J	0.011 J
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.098	< 0.021	< 0.02		< 0.02	< 0.02	0.11	< 0.02	< 0.02	< 0.099	< 0.02	< 0.019	< 0.47	< 0.019
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.39	< 0.084	< 0.081		< 0.08	< 0.081	< 0.083	< 0.081	< 0.08	< 0.39	< 0.081	< 0.076	< 1.9	< 0.074
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.82	0.23	0.11		0.01 J	< 0.004	1.3	< 0.004	< 0.004	0.28	< 0.004	< 0.004	0.29 J	0.025
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.006	< 0.004		< 0.005	< 0.004	< 0.004	< 0.004	0.015	0.005 J	< 0.006	< 0.004	< 0.003	< 0.004	< 0.004

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L18-SB01 03-Mar-16 N 0 - 1 ft	ERM-L18-SB01 08-Mar-16 N 5 - 6 ft	ERM-L18-SB02 03-Mar-16 N 0 - 1 ft	ERM-L18-SB02 07-Mar-16 N 0 - 1 ft	ERM-L18-SB02 07-Mar-16 N 6 - 7 ft	ERM-L18-SB02 07-Mar-16 N 8 - 9 ft	ERM-L18-SB03 04-Mar-16 N 0 - 1 ft	ERM-L18-SB03 08-Mar-16 N 7 - 8 ft	ERM-L18-SB03 08-Mar-16 N 10 - 11 ft	ERM-L18-SB04 03-Mar-16 N 0 - 1 ft	ERM-L18-SB04 08-Mar-16 N 9 - 10 ft	ERM-L18-SB04 08-Mar-16 N 15 - 16 ft	ERM-L19-SB01 03-Mar-16 N 0 - 1 ft	ERM-L19-SB01 07-Mar-16 N 7 - 8 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.004	< 0.003		< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.004	< 0.003		< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.01	< 0.007		< 0.008	0.015 J	0.016 J	< 0.006	0.042	0.031	0.02 J	0.025	< 0.006	< 0.007	< 0.006
Benzene	mg/kg	290	330	0.13	0.5	< 0.0007	< 0.0005		< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0004	< 0.0007	< 0.0005	< 0.0004	< 0.0005	< 0.0004
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	0.006	0.0009 J	0.002 J	0.002 J	< 0.0009	< 0.0009	< 0.0009
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.003	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Ethanol	mg/kg	NS	NS	NS	NS	< 0.15	< 0.1		< 0.12	< 0.1	< 0.1	< 0.092	< 0.098	< 0.088	< 0.14	< 0.099	< 0.087	< 0.095	< 0.088
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Methyl bromide	mg/kg	400	460	0.54	1	< 0.003	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.003	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.003	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.008	< 0.003	0.004 J	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.003	< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.16	< 0.11		< 0.13	< 0.11	< 0.11	< 0.1	< 0.11	< 0.097	< 0.15	< 0.11	< 0.096	< 0.1	< 0.097
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.006	< 0.004		< 0.005	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.006	< 0.004	< 0.003	< 0.004	< 0.004
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.0009

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L19-SB01 07-Mar-16 N 9 - 10 ft	ERM-L19-SB02 03-Mar-16 N 0 - 1 ft	ERM-L19-SB02 08-Mar-16 N 5 - 7 ft	ERM-L19-SB03 03-Mar-16 N 0 - 1 ft	ERM-L19-SB03 07-Mar-16 N 14 - 15 ft	ERM-L19-SB03 07-Mar-16 N 20 - 21 ft	ERM-L19-SB04 03-Mar-16 N 0 - 1 ft	ERM-L19-SB04 07-Mar-16 N 7.5 - 8.5 ft	ERM-L19-SB04 07-Mar-16 N 10 - 11 ft	ERM-L19-SB05 03-Mar-16 N 0 - 1 ft	ERM-L19-SB05 07-Mar-16 N 7.5 - 8.5 ft	ERM-L19-SB05 07-Mar-16 N 11 - 12 ft	ERM-L19-SB06 03-Mar-16 N 0 - 1 ft	ERM-L20-SB01 14-Dec-15 N 0 - 1 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS														0.25
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 5.6	< 5.7	< 5.8	< 5.8	< 6.1	< 6.0	< 5.6	< 6.4	< 6.4	< 5.9	< 6.3	< 6.1	< 5.8	< 6.1
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.20	< 0.20	< 0.21	< 0.21	< 0.21	< 0.21	< 0.20	< 0.23	< 0.22	< 0.20	< 0.22	< 0.21	< 0.21	0.48 J
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	13,400	16,500	10,600	9,720	15,200	15,000	9,810	23,200	19,400	21,300	11,100	21,200	19,100	10,900
Antimony	mg/kg	**1,300**	190,000	NS	**27**	1.43 J	< 0.420	1.87 J	< 0.537	< 0.566	0.595 J	< 0.521	1.40 J	1.11 J	1.92 J	5.82	0.796 J	< 0.604	3.20
Arsenic	mg/kg	**61**	190,000	NS	**29**	2.24	1.95	8.49	23.2	5.14	3.90	1.50 J	**29.1**	6.53	11.3	14.2	5.43	17.3	7.02
Barium	mg/kg	190,000	190,000	NS	8,200	200	183	158	103	51.1	51.9	162	249	68.4	161	179	62.7	189	131
Beryllium	mg/kg	6,400	190,000	NS	320	0.354 J	0.434	0.375 J	0.324 J	0.814	0.585	0.417 J	1.98	0.855	0.589	0.774	0.846	0.702	1.11
Cadmium	mg/kg	1,600	190,000	NS	38	0.955	0.376 J	0.900	0.229 J	0.670	0.639	0.336 J	1.24	0.801	0.500	1.41	0.815	0.743	0.905
Calcium	mg/kg	NS	NS	NS	NS	14,700	38,200	78,300	6,340	927	418	43,400	146,000	4,770	8,370	1,510	1,690	20,600	66,600
Chromium	mg/kg	190,000	190,000	NS	190,000	57.5	48.4	31.7	26.9	24.6	26.8	226	39.0	30.8	40.9	21.1	31.6	37.1	77.8
Cobalt	mg/kg	960	190,000	NS	160	9.51	8.06	5.37	3.70	6.66	5.49	6.18	7.32	5.59	9.10	5.30	9.70	7.46	11.3
Copper	mg/kg	120,000	190,000	NS	43,000	50.7	93.2	24.9	59.7	10.2	11.9	97.5	72.0	60.4	95.1	170	14.9	87.8	108
Iron	mg/kg	190,000	190,000	NS	NS	27,200	24,600	17,600	25,000	21,900	21,900	33,800	28,500	24,800	25,200	32,200	31,800	26,700	29,600
Lead	mg/kg	**1,000**	190,000	NS	**450**	8.54	31.3	73.9	112	7.40	7.54	28.4	96.2	113	74.8	**469**	13.4	117	95.5
Magnesium	mg/kg	NS	NS	NS	NS	11,200	24,000	48,400	2,890	2,890	2,790	23,200	8,510	3,420	7,470	1,650	3,110	11,000	13,300
Manganese	mg/kg	150,000	190,000	NS	**2,000**	267	468	264	128	120	155	1,420	244	167	317	179	1,030	285	626
Mercury	mg/kg	510	190,000	NS	**10**	0.0121 J	0.0764 J	0.259	0.559	< 0.0118	< 0.0119	0.0422 J	0.250	0.0644 J	0.198	3.92	< 0.0120	0.330	3.21
Nickel	mg/kg	64,000	190,000	NS	650	35.3	22.9	16.4	12.5	12.6	16.5	23.0	27.6	13.2	24.2	30.3	15.9	23.3	41.9
Potassium	mg/kg	NS	NS	NS	NS	5,780	4,790	3,230	1,820	1,820	1,520	3,750	2,060	1,950	3,720	1,090	1,680	3,100	1,580
Selenium	mg/kg	16,000	190,000	NS	26	< 0.684	< 0.653	< 0.905	< 0.836	< 0.880	< 0.890	0.968 J	< 0.973	< 0.851	< 0.830	< 0.812	< 0.912	< 0.940	< 0.964
Silver	mg/kg	16,000	190,000	NS	84	2.11	1.79	0.255 J	2.23	1.39	1.57	3.76	1.25	1.69	1.89	3.36	2.24	1.84	0.179 J
Sodium	mg/kg	NS	NS	NS	NS	177	180	168	254	70.8 J	55.9 J	236	931	1,060	106	91.4 J	97.1 J	632	327
Thallium	mg/kg	32	190,000	NS	**14**	< 0.610	< 0.583	< 0.808	< 0.746	< 0.786	< 0.795	< 0.723	< 0.868	< 0.760	< 0.741	< 0.725	< 0.815	< 0.839	1.65 J
Vanadium	mg/kg	**220**	190,000	NS	**820**	59.0	57.8	37.4	35.8	38.1	31.0	65.9	65.1	41.7	60.2	29.5	42.3	55.8	24.7
Zinc	mg/kg	190,000	190,000	NS	12,000	76.8	93.5	84.8	86.3	35.9	39.6	80.2	190	190	142	255	48.8	277	782
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.02	< 0.02	< 0.0041	< 0.021	< 0.0044	< 0.0043	< 0.0040	< 0.0046	< 0.0046	< 0.021	< 0.023	< 0.0043	< 0.041	< 0.044
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.025	< 0.026	< 0.0053	< 0.027	< 0.0056	< 0.0054	< 0.0051	< 0.0059	< 0.0058	< 0.027	< 0.029	< 0.0055	< 0.053	< 0.056
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.044	< 0.045	< 0.0092	< 0.047	< 0.0098	< 0.0095	< 0.0088	< 0.01	< 0.01	< 0.047	< 0.05	< 0.0096	< 0.091	< 0.097
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.018	< 0.018	< 0.0038	< 0.019	< 0.0040	< 0.0039	< 0.0036	< 0.0042	< 0.0042	< 0.019	< 0.021	< 0.0040	< 0.038	< 0.04
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.018	< 0.018	< 0.0038	< 0.019	< 0.0040	< 0.0039	0.03	< 0.0042	< 0.0042	< 0.019	< 0.021	< 0.0040	< 0.038	< 0.04
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.018	0.045 J	0.053	0.076 J	< 0.0040	< 0.0039	< 0.0036	< 0.0042	< 0.0042	< 0.019	< 0.021	< 0.0040	< 0.038	< 0.04
Aroclor 1260	mg/kg	**46**	190,000	NS	770	0.35	0.052 J	0.033	0.17	< 0.0060	< 0.0058	0.077	0.069	< 0.0062	0.2	< 0.031	< 0.0059	1.8	1.5
Total PCBs	mg/kg	NS	NS	NS	NS	0.35	0.097	0.086	0.25	< 0.0040	< 0.0039	0.11	0.069	< 0.0042	0.2	< 0.021	< 0.0040	1.8	1.5
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.33	< 8.5	< 3.5	< 1.7	< 0.37	< 0.36	< 8.3	< 0.38	< 0.38	< 8.8	< 0.38	< 0.36	< 8.6	< 3.6
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.073	< 1.9	< 0.77	< 0.39	< 0.081	< 0.079	< 1.8	< 0.085	< 0.085	< 1.9	< 0.084	< 0.08	< 1.9	< 0.81
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.007	< 0.19	< 0.077	< 0.039	< 0.008	< 0.008	< 0.18	< 0.008	< 0.009	< 0.2	< 0.008	< 0.008	< 0.19	< 0.081
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L19-SB01 07-Mar-16 N 9 - 10 ft	ERM-L19-SB02 03-Mar-16 N 0 - 1 ft	ERM-L19-SB02 08-Mar-16 N 5 - 7 ft	ERM-L19-SB03 03-Mar-16 N 0 - 1 ft	ERM-L19-SB03 07-Mar-16 N 14 - 15 ft	ERM-L19-SB03 07-Mar-16 N 20 - 21 ft	ERM-L19-SB04 03-Mar-16 N 0 - 1 ft	ERM-L19-SB04 07-Mar-16 N 7.5 - 8.5 ft	ERM-L19-SB04 07-Mar-16 N 10 - 11 ft	ERM-L19-SB05 03-Mar-16 N 0 - 1 ft	ERM-L19-SB05 07-Mar-16 N 7.5 - 8.5 ft	ERM-L19-SB05 07-Mar-16 N 11 - 12 ft	ERM-L19-SB06 03-Mar-16 N 0 - 1 ft	ERM-L20-SB01 14-Dec-15 N 0 - 1 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	< 0.004	< 0.094	0.058 J	0.23	< 0.004	< 0.004	< 0.092	0.055	0.07	< 0.097	0.15	< 0.004	< 0.095	< 0.04
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.11	< 2.8	< 1.2	< 0.58	< 0.12	< 0.12	< 2.8	< 0.13	< 0.13	< 2.9	< 0.13	< 0.12	< 2.9	< 1.2
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.073	< 1.9	< 0.77	< 0.39	< 0.081	< 0.079	< 1.8	< 0.085	< 0.085	< 1.9	< 0.084	< 0.08	< 1.9	< 0.81
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.18	< 4.7	< 1.9	< 0.96	< 0.2	< 0.2	< 4.6	< 0.21	< 0.21	< 4.9	< 0.21	< 0.2	< 4.8	< 2
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.004	< 0.094	0.11 J	0.88	< 0.004	< 0.004	< 0.092	< 0.004	0.097	0.16 J	0.027	< 0.004	0.39 J	< 0.04
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	0.004 J	< 0.094	< 0.039	0.086 J	< 0.004	< 0.004	< 0.092	0.055	0.015 J	< 0.097	0.021 J	< 0.004	0.27 J	< 0.04
Anthracene	mg/kg	190,000	190,000	NS	350	0.007 J	0.14 J	0.44	2.8	< 0.004	< 0.004	< 0.092	0.12	0.18	0.3 J	0.051	< 0.004	1.4	< 0.04
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.019	0.59	1.6	4.6	< 0.004	< 0.004	0.2 J	0.47	0.35	0.5	0.13	0.007 J	5	0.16 J
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.022	0.7	1.7	2.8	< 0.004	< 0.004	0.18 J	0.45	0.29	0.36 J	0.081	0.006 J	3.9	0.2 J
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.031	0.88	1.9	4.8	< 0.004	< 0.004	0.26 J	0.62	0.34	0.6	0.17	0.008 J	3.9	0.28
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.025	0.61	1.1	1.7	0.005 J	0.005 J	0.16 J	0.34	0.19	0.31 J	0.078	0.006 J	1.6	0.24
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.014 J	0.43 J	0.91	2.2	< 0.004	< 0.004	0.1 J	0.25	0.12	0.34 J	0.051	0.006 J	1.4	0.13 J
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.073	< 1.9	< 0.77	< 0.39	< 0.081	< 0.079	< 1.8	< 0.085	< 0.085	< 1.9	< 0.084	< 0.08	< 1.9	< 0.81
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.073	< 1.9	< 0.77	< 0.39	< 0.081	< 0.079	< 1.8	< 0.085	< 0.085	< 1.9	< 0.084	< 0.08	< 1.9	< 0.81
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.018	< 0.47	0.23 J	0.48	< 0.02	< 0.02	< 0.46	0.028 J	0.037 J	< 0.49	0.022 J	< 0.02	< 0.48	< 0.2
Chrysene	mg/kg	760	190,000	NS	230	0.024	0.64	1.8	5.3	< 0.004	< 0.004	0.23 J	0.51	0.35	0.59	0.27	0.008 J	4.9	0.18 J
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.006 J	0.25 J	0.29	0.55	0.004 J	< 0.004	0.094 J	0.078	0.039	< 0.097	0.026	0.004 J	0.42 J	0.046 J
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.018	< 0.47	< 0.19	0.65	< 0.02	< 0.02	< 0.46	0.045	0.059	< 0.49	0.044	< 0.02	< 0.48	< 0.2
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.073	< 1.9	< 0.77	< 0.39	< 0.081	< 0.079	< 1.8	< 0.085	< 0.085	< 1.9	< 0.084	< 0.08	< 1.9	< 0.81
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	0.035 J	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.073	< 1.9	< 0.77	< 0.39	< 0.081	< 0.079	< 1.8	< 0.085	< 0.085	< 1.9	< 0.084	< 0.08	< 1.9	< 0.81
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.073	< 1.9	< 0.77	< 0.39	< 0.081	< 0.079	< 1.8	< 0.085	< 0.085	< 1.9	< 0.084	< 0.08	< 1.9	< 0.81
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.18	< 4.7	< 1.9	< 0.96	< 0.2	< 0.2	< 4.6	< 0.21	< 0.21	< 4.9	< 0.21	< 0.2	< 4.8	< 2
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.073	< 1.9	< 0.77	< 0.39	< 0.081	< 0.079	< 1.8	< 0.085	< 0.085	< 1.9	< 0.084	< 0.08	< 1.9	< 0.81
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.028	1.2	3	9.8	< 0.004	< 0.004	0.28 J	0.59	0.56	1.1	0.2	0.01 J	5.2	0.3
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.004	< 0.094	0.16 J	0.95	< 0.004	< 0.004	< 0.092	0.043	0.11	0.13 J	0.034	< 0.004	0.29 J	< 0.04
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.094	< 0.039	< 0.019	< 0.004	< 0.004	< 0.092	< 0.004	< 0.004	< 0.097	< 0.004	< 0.004	< 0.095	< 0.04
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.18	< 4.7	< 1.9	< 0.96	< 0.2	< 0.2	< 4.6	< 0.21	< 0.21	< 4.9	< 0.21	< 0.2	< 4.8	< 2
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.037	< 0.94	< 0.39	< 0.19	< 0.041	< 0.04	< 0.92	< 0.042	< 0.043	< 0.97	< 0.042	< 0.04	< 0.95	< 0.4
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.019	0.51	0.9	1.6	0.004 J	< 0.004	0.14 J	0.31	0.17	0.21 J	0.067	0.006 J	1.3	0.15 J
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
Naphthalene	mg/kg	760	190,000	25	**25**	< 0.004	< 0.094	0.24	0.11	< 0.004	< 0.004	< 0.092	0.055	0.053	< 0.097	0.12	0.004 J	< 0.095	< 0.04
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	< 0.021	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.037	< 0.94	< 0.39	< 0.19	< 0.041	< 0.04	< 0.92	< 0.042	< 0.043	< 0.97	< 0.042	< 0.04	< 0.95	< 0.4
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	0.16	0.056	< 0.49	0.028 J	< 0.02	< 0.48	< 0.2
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.037	< 0.94	< 0.39	< 0.19	< 0.041	< 0.04	< 0.92	< 0.042	< 0.043	< 0.97	< 0.042	< 0.04	< 0.95	< 0.4
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.015 J	0.47 J	1.6	11	< 0.004	< 0.004	0.14 J	0.31	0.49	0.69	0.24	0.006 J	4.3	0.16 J
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.018	< 0.47	< 0.19	< 0.096	< 0.02	< 0.02	< 0.46	0.079	< 0.021	< 0.49	< 0.021	< 0.02	< 0.48	< 0.2
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.073	< 1.9	< 0.77	< 0.39	< 0.081	< 0.079	< 1.8	< 0.085	< 0.085	< 1.9	< 0.084	< 0.08	< 1.9	< 0.81
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.03	1	2.7	8	< 0.004	< 0.004	0.31 J	0.57	0.58	0.94	0.2	0.012 J	9	0.3
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.004	< 0.005	0.077	< 0.005	< 0.005	< 0.004	< 0.003	0.006 J	0.017 J	< 0.004	0.007 J	< 0.004	< 0.005	< 0.005

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L19-SB01 07-Mar-16 N 9 - 10 ft	ERM-L19-SB02 03-Mar-16 N 0 - 1 ft	ERM-L19-SB02 08-Mar-16 N 5 - 7 ft	ERM-L19-SB03 03-Mar-16 N 0 - 1 ft	ERM-L19-SB03 07-Mar-16 N 14 - 15 ft	ERM-L19-SB03 07-Mar-16 N 20 - 21 ft	ERM-L19-SB04 03-Mar-16 N 0 - 1 ft	ERM-L19-SB04 07-Mar-16 N 7.5 - 8.5 ft	ERM-L19-SB04 07-Mar-16 N 10 - 11 ft	ERM-L19-SB05 03-Mar-16 N 0 - 1 ft	ERM-L19-SB05 07-Mar-16 N 7.5 - 8.5 ft	ERM-L19-SB05 07-Mar-16 N 11 - 12 ft	ERM-L19-SB06 03-Mar-16 N 0 - 1 ft	ERM-L20-SB01 14-Dec-15 N 0 - 1 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.002	< 0.004	< 0.008	< 0.003	< 0.003	< 0.003	< 0.004	< 0.004
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.002	< 0.004	< 0.008	< 0.003	< 0.003	< 0.003	< 0.004	< 0.004
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.007	0.016 J	0.24	0.011 J	0.015 J	< 0.006	< 0.006	0.026	0.066	< 0.007	0.032	0.02	< 0.008	< 0.008
Benzene	mg/kg	290	330	0.13	0.5	< 0.0005	< 0.0006	< 0.0006	< 0.0007	< 0.0006	< 0.0004	< 0.0004	< 0.0006	< 0.001	< 0.0005	< 0.0005	< 0.0004	0.0008 J	< 0.0006
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.001	< 0.001	0.008	< 0.001	< 0.001	< 0.0009	< 0.0008	0.02	0.13	< 0.001	0.001 J	< 0.0009	< 0.001	< 0.001
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Ethanol	mg/kg	NS	NS	NS	NS	< 0.099	< 0.11	< 0.11	< 0.13	< 0.11	< 0.088	< 0.082	< 0.12	< 0.26	< 0.11	< 0.1	< 0.089	< 0.12	1.2
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.001	< 0.001	0.016	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.11	< 0.13	< 0.12	< 0.15	< 0.13	< 0.096	< 0.09	< 0.13	< 0.28	< 0.12	< 0.11	< 0.098	< 0.13	< 0.13
Styrene	mg/kg	10,000	10,000	79	24	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.004	< 0.005	< 0.004	< 0.005	< 0.005	< 0.004	< 0.003	< 0.005	< 0.01	< 0.004	< 0.004	< 0.004	< 0.005	< 0.005
Toluene	mg/kg	10,000	10,000	44	100	< 0.001	< 0.001	0.007	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.001	< 0.001	0.06	< 0.001	< 0.001	< 0.0009	< 0.0008	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L20-SB02 14-Dec-15 N 0 - 1 ft	ERM-L20-SB03 14-Dec-15 N 0 - 1 ft	ERM-L20-SB04 14-Dec-15 N 0 - 1 ft	ERM-L21-SB01 14-Dec-15 N 0 - 1 ft	ERM-L21-SB02 14-Dec-15 N 0 - 1 ft	ERM-L21-SB03 14-Dec-15 N 0 - 1 ft	ERM-L21-SB03 14-Jan-16 N 13 - 14 ft	ERM-L21-SB03 14-Jan-16 N 18 - 19 ft	ERM-L21-SB04 14-Dec-15 N 0 - 1 ft	ERM-L21-SB04 21-Dec-15 N 8 - 9 ft	ERM-L21-SB04 21-Dec-15 N 22 - 23 ft	ERM-L21-SB05 14-Dec-15 N 0 - 1 ft	ERM-L21-SB05 14-Jan-16 N 8 - 9 ft	ERM-L21-SB05 14-Jan-16 N 17 - 18 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS	< 0.25	0.25	0.5	< 0.25		< 0.25			< 0.25	< 0.25				
Asbestos, Amosite	%	NS	NS	NS	NS			0.25		0.25							0.25		
Asbestos	%	NS	NS	NS	NS							None Detected	None Detected			None Detected		None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.9	< 8.2	< 8.1	< 7.4	< 7.4	< 6.1	< 5.9	< 8.8	< 6.0	< 6.1	< 5.9	< 6.3	< 6.3	< 5.8
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	1.4	0.61 J	1.3	0.95	0.51 J	< 0.21	< 0.20	< 0.32	< 0.22	< 0.22	< 0.21	< 0.22	< 0.22	< 0.20
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	10,200	14,600	13,200	9,680	12,700	13,700	17,500	34,100	14,900	13,500	10,300	16,300	20,700	13,100
Antimony	mg/kg	**1,300**	190,000	NS	**27**	< 2.79	4.04	2.58 J	< 2.96	1.83 J	2.24 J	< 0.544	< 0.834	2.16 J	< 0.659	< 0.638	6.13	< 0.626	1.87 J
Arsenic	mg/kg	**61**	190,000	NS	**29**	< 3.94	20.3	9.22	11.0 J	5.88	7.56	5.65	5.18	14.3	5.02	2.35 J	12.0	6.99	4.84
Barium	mg/kg	190,000	190,000	NS	8,200	183	146	281	258	260	156	56.6	95.5	147	162	33.9	195	62.7	57.7
Beryllium	mg/kg	6,400	190,000	NS	320	1.09 J	1.88	1.44	1.78 J	0.815	0.799	0.911	1.11	1.00	1.20	0.446 J	0.974	0.960	0.727
Cadmium	mg/kg	1,600	190,000	NS	38	1.77	2.25	1.62	1.10 J	0.981	0.930	< 0.0493	< 0.0757	0.933	0.154 J	< 0.0579	0.449 J	< 0.0568	< 0.0522
Calcium	mg/kg	NS	NS	NS	NS	58,600	19,200	61,300	43,800	7,930	2,690	914	1,760	5,850	28,300	567	8,370	1,240	1,200
Chromium	mg/kg	190,000	190,000	NS	190,000	155	87.2	81.3	51.6	43.4	27.8	34.6	52.7	38.6	21.5	17.7	53.8	38.8	29.0
Cobalt	mg/kg	960	190,000	NS	160	8.75	9.16	9.68	7.53	8.16	6.84	7.85	7.21	7.50	3.70	3.93	10.6	5.49	4.59
Copper	mg/kg	120,000	190,000	NS	43,000	99.9	333	121	151	79.0	120	29.5	124	147	28.6	10.7	145	12.8	13.7
Iron	mg/kg	190,000	190,000	NS	NS	68,300	34,600	53,800	36,000	23,400	23,300	23,100	17,800	31,400	16,900	14,400	32,300	26,700	17,100
Lead	mg/kg	**1,000**	190,000	NS	**450**	**809**	198	162	289	205	155	30.2	16.2	269	56.7	6.11	248	11.7	8.92
Magnesium	mg/kg	NS	NS	NS	NS	15,100	6,150	11,600	8,980	4,740	3,270	3,320	3,530	3,620	7,370	1,670	5,100	3,250	3,160
Manganese	mg/kg	150,000	190,000	NS	**2,000**	709	520	823	493	260	260	236	131	285	553	93.3	343	147	169
Mercury	mg/kg	510	190,000	NS	**10**	5.93	2.42	6.14	2.46	2.39	0.381	< 0.0111	< 0.0172	0.264	0.738	< 0.0117	**19.8**	0.164	0.0248 J
Nickel	mg/kg	64,000	190,000	NS	650	43.9	41.0	54.1	28.2	30.2	106	22.7	30.3	47.5	11.4	10.1	41.7	14.3	12.5
Potassium	mg/kg	NS	NS	NS	NS	2,390	2,610	1,920	1,350	3,440	1,780	1,860	1,520	1,930	1,420	888	3,100	1,880	1,670
Selenium	mg/kg	16,000	190,000	NS	26	1.54 J	1.99 J	1.50 J	< 6.05	1.27 J	< 0.989	1.63 J	< 1.30	1.15 J	< 1.01	< 0.981	1.30 J	1.60 J	< 0.895
Silver	mg/kg	16,000	190,000	NS	84	1.99 J	0.336 J	< 0.188	< 0.866	0.593 J	0.223 J	0.485 J	< 0.278	< 0.140	0.461 J	0.448 J	0.281 J	0.586	< 0.192
Sodium	mg/kg	NS	NS	NS	NS	344	187	395	304	150	102 J	115	120 J	173	247	69.4 J	138	78.6 J	112
Thallium	mg/kg	32	190,000	NS	**14**	12.3 J	1.95 J	2.45 J	< 5.41	1.56 J	1.33 J	2.55 J	3.16 J	1.25 J	10.7	4.50	1.17 J	3.07 J	1.86 J
Vanadium	mg/kg	**220**	190,000	NS	**820**	24.7	57.3	34.3	35.5	52.0	52.2	43.7	62.6	53.7	24.2	23.8	65.2	44.2	30.2
Zinc	mg/kg	190,000	190,000	NS	12,000	953	915	948	959	546	427	75.1	89.2	384	114	25.3	329	42.1	38.2
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.1	< 0.29	< 0.29	< 0.26	< 0.11	< 0.022	< 0.0042	< 0.0063	< 0.022	< 0.0044	< 0.0042	< 0.089	< 0.0045	< 0.0042
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.13	< 0.37	< 0.37	< 0.34	< 0.14	< 0.028	< 0.0054	< 0.0080	< 0.028	< 0.0056	< 0.0054	< 0.11	< 0.0058	< 0.0053
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.22	< 0.65	< 0.64	< 0.58	< 0.24	< 0.049	< 0.0093	< 0.014	< 0.048	< 0.0097	< 0.0094	< 0.2	< 0.01	< 0.0093
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.091	< 0.27	< 0.27	< 0.24	< 0.098	< 0.02	< 0.0038	< 0.0057	< 0.02	< 0.0040	< 0.0039	< 0.082	< 0.0042	< 0.0038
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.091	< 0.27	< 0.27	< 0.24	< 0.098	< 0.02	< 0.0038	< 0.0057	< 0.02	< 0.0040	< 0.0039	< 0.082	< 0.0042	< 0.0038
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.091	< 0.27	< 0.27	< 0.24	< 0.098	< 0.02	< 0.0038	< 0.0057	< 0.02	< 0.0040	< 0.0039	< 0.082	< 0.0042	< 0.0038
Aroclor 1260	mg/kg	**46**	190,000	NS	770	3.7	7.2	17	6.8	2.2	0.35	< 0.0057	< 0.0085	0.28	< 0.0060	< 0.0058	3.5	0.017 J	0.03
Total PCBs	mg/kg	NS	NS	NS	NS	3.7	7.2	17	6.8	2.2	0.35	< 0.0038	< 0.0057	0.28	< 0.0040	< 0.0039	3.5	0.017 J	0.03
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 4.1	< 4.8	< 4.8	< 4.4	< 4.4	< 3.6	< 0.35	< 0.52	< 3.6	< 0.37	< 0.35	< 3.7	< 0.38	< 0.34
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.91	< 1.1	< 1.1	< 0.97	< 0.98	< 0.81	< 0.078	< 0.12	< 0.79	< 0.081	< 0.078	< 0.83	< 0.084	< 0.077
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.091	< 0.11	< 0.11	< 0.097	< 0.098	< 0.081	< 0.008	< 0.012	< 0.079	< 0.008	< 0.008	< 0.083	< 0.008	< 0.008
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L20-SB02 14-Dec-15 N 0 - 1 ft	ERM-L20-SB03 14-Dec-15 N 0 - 1 ft	ERM-L20-SB04 14-Dec-15 N 0 - 1 ft	ERM-L21-SB01 14-Dec-15 N 0 - 1 ft	ERM-L21-SB02 14-Dec-15 N 0 - 1 ft	ERM-L21-SB03 14-Dec-15 N 0 - 1 ft	ERM-L21-SB03 14-Jan-16 N 13 - 14 ft	ERM-L21-SB03 14-Jan-16 N 18 - 19 ft	ERM-L21-SB04 14-Dec-15 N 0 - 1 ft	ERM-L21-SB04 21-Dec-15 N 8 - 9 ft	ERM-L21-SB04 21-Dec-15 N 22 - 23 ft	ERM-L21-SB05 14-Dec-15 N 0 - 1 ft	ERM-L21-SB05 14-Jan-16 N 8 - 9 ft	ERM-L21-SB05 14-Jan-16 N 17 - 18 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	< 0.045	0.2 J	0.06 J	0.14 J	0.071 J	0.13 J	< 0.004	< 0.006	0.13 J	0.18	< 0.004	0.082 J	< 0.004	< 0.004
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 1.4	< 1.6	< 1.6	< 1.5	< 1.5	< 1.2	< 0.12	< 0.17	< 1.2	< 0.12	< 0.12	< 1.2	< 0.13	< 0.11
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.91	< 1.1	< 1.1	< 0.97	< 0.98	< 0.81	< 0.078	< 0.12	< 0.79	< 0.081	< 0.078	< 0.83	< 0.084	< 0.077
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 2.3	< 2.7	< 2.7	< 2.4	< 2.5	< 2	< 0.19	< 0.29	< 2	< 0.2	< 0.2	< 2.1	< 0.21	< 0.19
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.045	4.8	< 0.054	0.073 J	0.05 J	0.089 J	< 0.004	< 0.006	0.08 J	0.39	< 0.004	0.078 J	< 0.004	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	0.046 J	0.37	0.12 J	1.4	0.094 J	0.17 J	< 0.004	< 0.006	0.098 J	0.052	< 0.004	0.24	< 0.004	< 0.004
Anthracene	mg/kg	190,000	190,000	NS	350	0.062 J	36	0.16 J	1.7	0.15 J	0.35	< 0.004	< 0.006	0.22	1.2	< 0.004	0.45	< 0.004	< 0.004
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.17 J	**200**	0.35	5.9	0.6	1.7	< 0.004	< 0.006	0.6	1.6	0.007 J	1.3	< 0.004	0.005 J
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.25	**110**	0.39	4	0.57	2.5	< 0.004	< 0.006	0.56	1.3	0.007 J	1.1	0.005 J	0.006 J
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.31	**160**	0.71	8	0.7	3.1	< 0.004	< 0.006	0.78	1.9	0.01 J	2	0.007 J	0.007 J
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.76	43	0.49	2.3	0.41	1.6	< 0.004	< 0.006	0.41	0.76	0.006 J	0.99	0.004 J	0.005 J
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.12 J	**81**	0.2 J	3.6	0.39	1.4	< 0.004	< 0.006	0.3	0.67	0.005 J	0.72	< 0.004	0.005 J
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.91	< 1.1	< 1.1	< 0.97	< 0.98	< 0.81	< 0.078	< 0.12	< 0.79	< 0.081	< 0.078	< 0.83	< 0.084	< 0.077
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.91	< 1.1	< 1.1	< 0.97	< 0.98	< 0.81	< 0.078	< 0.12	< 0.79	< 0.081	< 0.078	< 0.83	< 0.084	0.12 J
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.23	5.4	< 0.27	0.33 J	< 0.25	0.24 J	< 0.019	< 0.029	< 0.2	0.33	< 0.02	< 0.21	< 0.021	< 0.019
Chrysene	mg/kg	760	190,000	NS	230	0.24	150	0.44	7.6	0.69	2	< 0.004	< 0.006	0.6	1.5	0.007 J	1.3	0.005 J	0.006 J
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.099 J	16	0.087 J	0.91	0.086 J	0.63	< 0.004	< 0.006	0.12 J	0.22	0.005 J	0.18 J	< 0.004	< 0.004
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.23	2.1	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	0.31	< 0.02	< 0.21	< 0.021	< 0.019
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.91	1.8 J	< 1.1	< 0.97	< 0.98	< 0.81	< 0.078	< 0.12	< 0.79	< 0.081	< 0.078	< 0.83	< 0.084	< 0.077
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.91	< 1.1	< 1.1	< 0.97	< 0.98	< 0.81	< 0.078	< 0.12	< 0.79	< 0.081	< 0.078	< 0.83	< 0.084	< 0.077
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.91	< 1.1	< 1.1	< 0.97	< 0.98	< 0.81	< 0.078	< 0.12	< 0.79	< 0.081	< 0.078	< 0.83	< 0.084	< 0.077
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 2.3	< 2.7	< 2.7	< 2.4	< 2.5	< 2	< 0.19	< 0.29	< 2	< 0.2	< 0.2	< 2.1	< 0.21	< 0.19
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.91	< 1.1	< 1.1	< 0.97	< 0.98	< 0.81	< 0.078	< 0.12	< 0.79	< 0.081	< 0.078	< 0.83	< 0.084	< 0.077
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.22 J	540	0.67	9	1.2	2	< 0.004	< 0.006	1.1	4.2	0.009 J	1.6	0.007 J	0.01 J
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.045	8	< 0.054	0.15 J	0.055 J	0.12 J	< 0.004	< 0.006	0.081 J	0.46	< 0.004	0.091 J	< 0.004	< 0.004
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.045	< 0.054	< 0.054	< 0.049	< 0.049	< 0.041	< 0.004	< 0.006	< 0.039	< 0.004	< 0.004	< 0.042	< 0.004	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 2.3	< 2.7	< 2.7	< 2.4	< 2.5	< 2	< 0.19	< 0.29	< 2	< 0.2	< 0.2	< 2.1	< 0.21	< 0.19
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.46	< 0.54	< 0.54	< 0.49	< 0.49	< 0.41	< 0.039	< 0.058	< 0.4	< 0.041	< 0.039	< 0.42	< 0.042	< 0.038
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.2 J	47	0.29	2.3	0.33	1.7	< 0.004	< 0.006	0.38	0.73	0.005 J	0.77	< 0.004	< 0.004
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
Naphthalene	mg/kg	760	190,000	25	**25**	< 0.045	0.32	0.075 J	0.32	0.084 J	0.19 J	< 0.004	< 0.006	0.16 J	0.35	< 0.004	0.11 J	< 0.004	< 0.004
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.46	< 0.54	< 0.54	< 0.49	< 0.49	< 0.41	< 0.039	< 0.058	< 0.4	< 0.041	< 0.039	< 0.42	< 0.042	< 0.038
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.46	< 0.54	< 0.54	< 0.49	< 0.49	< 0.41	< 0.039	< 0.058	< 0.4	< 0.041	< 0.039	< 0.42	< 0.042	< 0.038
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.099 J	180	0.28	1.2	0.65	0.94	< 0.004	< 0.006	0.76	4	0.007 J	0.76	0.006 J	0.01 J
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.23	< 0.27	< 0.27	< 0.24	< 0.25	< 0.2	< 0.019	< 0.029	< 0.2	< 0.02	< 0.02	< 0.21	< 0.021	< 0.019
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.91	< 1.1	< 1.1	< 0.97	< 0.98	< 0.81	< 0.078	< 0.12	< 0.79	< 0.081	< 0.078	< 0.83	< 0.084	< 0.077
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.26	460	0.62	8.2	1.1	1.9	< 0.004	< 0.006	0.97	3.5	0.009 J	2	0.01 J	0.013 J
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.007	< 0.007	< 0.007	< 0.007	< 0.006	< 0.004	< 0.003	< 0.006	< 0.003	< 0.004	< 0.003	< 0.004	< 0.005	< 0.003

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L20-SB02 14-Dec-15 N 0 - 1 ft	ERM-L20-SB03 14-Dec-15 N 0 - 1 ft	ERM-L20-SB04 14-Dec-15 N 0 - 1 ft	ERM-L21-SB01 14-Dec-15 N 0 - 1 ft	ERM-L21-SB02 14-Dec-15 N 0 - 1 ft	ERM-L21-SB03 14-Dec-15 N 0 - 1 ft	ERM-L21-SB03 14-Jan-16 N 13 - 14 ft	ERM-L21-SB03 14-Jan-16 N 18 - 19 ft	ERM-L21-SB04 14-Dec-15 N 0 - 1 ft	ERM-L21-SB04 21-Dec-15 N 8 - 9 ft	ERM-L21-SB04 21-Dec-15 N 22 - 23 ft	ERM-L21-SB05 14-Dec-15 N 0 - 1 ft	ERM-L21-SB05 14-Jan-16 N 8 - 9 ft	ERM-L21-SB05 14-Jan-16 N 17 - 18 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.005	< 0.005	< 0.006	< 0.005	< 0.004	< 0.003	< 0.003	< 0.005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.002
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.005	< 0.005	< 0.006	< 0.005	< 0.004	< 0.003	< 0.003	< 0.005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.002
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.012	< 0.012	< 0.013	< 0.012	< 0.01	< 0.007	0.028	< 0.011	< 0.006	0.016 J	0.018	< 0.008	0.04	< 0.006
Benzene	mg/kg	290	330	0.13	0.5	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0007	< 0.0005	< 0.0004	< 0.0008	< 0.0004	< 0.0005	< 0.0004	< 0.0006	< 0.0006	< 0.0004
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	0.006	0.002 J	< 0.001	< 0.001	< 0.0008
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Ethanol	mg/kg	NS	NS	NS	NS	< 0.17	0.62 J	1.4	< 0.17	4.5	< 0.097	< 0.087	< 0.16	< 0.086	< 0.11	< 0.086	< 0.11	< 0.11	< 0.082
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	0.005 J	< 0.001	< 0.0008
Methyl bromide	mg/kg	400	460	0.54	1	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.19	< 0.19	< 0.2	< 0.19	< 0.15	< 0.11	< 0.096	< 0.18	< 0.095	< 0.12	< 0.095	< 0.12	< 0.13	< 0.09
Styrene	mg/kg	10,000	10,000	79	24	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.007	< 0.007	< 0.007	< 0.007	< 0.006	< 0.004	< 0.003	< 0.006	0.005 J	< 0.004	< 0.003	< 0.004	< 0.005	< 0.003
Toluene	mg/kg	10,000	10,000	44	100	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0008
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.0009	< 0.002	< 0.0009	< 0.001	< 0.0009	0.031	< 0.001	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L21-SB06 14-Dec-15 N 0 - 1 ft	ERM-L21-SB06 18-Jan-16 N 6 - 7 ft	ERM-L21-SB06 18-Jan-16 N 11 - 12 ft	ERM-L22-SB01 14-Oct-15 N 0 - 1 ft	ERM-L22-SB01 21-Oct-15 N 12 - 13 ft	ERM-L22-SB01 21-Oct-15 N 15 - 16 ft	ERM-L22-SB02 14-Oct-15 N 0 - 1 ft	ERM-L22-SB02 21-Oct-15 N 10 - 11 ft	ERM-L22-SB02 21-Oct-15 N 19 - 20 ft	ERM-L22-SB03 14-Oct-15 N 0 - 1 ft	ERM-L22-SB03 21-Oct-15 N 11 - 12 ft	ERM-L22-SB03 21-Oct-15 N 19 - 20 ft	ERM-L22-SB04 14-Oct-15 N 0 - 1 ft	ERM-L22-SB04 21-Oct-15 N 10 - 11 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS	< 0.25												< 0.25	
Asbestos, Amosite	%	NS	NS	NS	NS	0.25													
Asbestos	%	NS	NS	NS	NS		None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected		None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.3	< 5.4	< 6.2	< 6.0	< 6.0	< 6.1	< 6.2	< 6.1	< 6.0	< 5.9	< 6.2	< 6.0	< 6.1	< 6.2
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	1.1	< 0.19	< 0.22	0.48 J	< 0.21	< 0.21	< 0.22	< 0.21	< 0.22	< 0.21	< 0.22	< 0.20	< 0.22	< 0.21
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	12,800	16,100	15,200	11,500	12,800	9,990	13,200	8,240	15,900	24,300	22,000	21,400	10,000	19,600
Antimony	mg/kg	**1,300**	190,000	NS	**27**	19.5	< 0.418	< 0.455	< 0.491	< 0.494	< 0.481	< 0.504	< 0.490	1.24 J	2.52	< 0.510	< 0.476	< 0.491	0.510 J
Arsenic	mg/kg	**61**	190,000	NS	**29**	5.83	4.69	2.64	7.57	6.40	7.52	11.7	3.45	1.86 J	7.01	5.55	1.29 J	24.4	7.47
Barium	mg/kg	190,000	190,000	NS	8,200	306	42.4	59.2	115	67.5	51.9	129	57.8	61.7	817	126	91.0	84.4	79.3
Beryllium	mg/kg	6,400	190,000	NS	320	1.25	0.791	0.573	0.693	0.948	0.814	0.812	0.683	1.18	3.28	0.933	0.700	0.681	1.14
Cadmium	mg/kg	1,600	190,000	NS	38	2.64	< 0.190	< 0.0413	0.714	< 0.0518	< 0.0504	1.01	< 0.0513	< 0.0514	1.22	< 0.0535	< 0.0499	0.568 J	< 0.0504
Calcium	mg/kg	NS	NS	NS	NS	66,000	574	1,030	21,600	1,680	1,790	6,490	1,540	1,460	83,600	1,870	828	3,690	1,640
Chromium	mg/kg	190,000	190,000	NS	190,000	49.0	25.5	29.4	26.8	32.0	24.7	32.1	12.7	46.2	19.9	40.4	29.8	24.4	34.4
Cobalt	mg/kg	960	190,000	NS	160	8.79	6.80	6.03	5.91	7.48	11.5	7.39	5.02	11.7	4.27	3.42	12.4	6.19	7.57
Copper	mg/kg	120,000	190,000	NS	43,000	98.3	21.5	23.1	59.4	21.8	25.7	143	8.24	21.5	35.3	19.7	23.3	55.0	22.3
Iron	mg/kg	190,000	190,000	NS	NS	41,100	22,800	17,000	17,900	26,800	27,000	23,000	9,330	54,100	16,700	20,100	18,800	28,300	28,200
Lead	mg/kg	**1,000**	190,000	NS	**450**	126	8.92	8.22	274	9.25	17.9	153	20.8	10.4	180	11.3	8.72	75.4	14.2
Magnesium	mg/kg	NS	NS	NS	NS	8,350	2,850	3,200	11,400	3,400	2,500	4,410	1,120	2,320	15,900	2,450	3,380	2,950	2,790
Manganese	mg/kg	150,000	190,000	NS	**2,000**	769	201	206	243	276	282	263	216	541	1,740	71.8	338	219	134
Mercury	mg/kg	510	190,000	NS	**10**	**54.5**	< 0.0104	< 0.0117	0.258	0.0224 J	0.0261 J	0.329	0.0243 J	< 0.0118	0.197	0.0233 J	< 0.0119	0.225	< 0.0114
Nickel	mg/kg	64,000	190,000	NS	650	30.6	12.4	12.2	19.2	17.6	14.0	39.2	5.73	15.7	13.6	14.0	22.6	21.0	14.5
Potassium	mg/kg	NS	NS	NS	NS	2,140	1,630	1,720	2,230	1,540	1,290	2,430	371	1,500	1,420	1,920	1,880	1,520	1,820
Selenium	mg/kg	16,000	190,000	NS	26	1.06 J	0.890 J	< 0.707	3.51	3.74	3.86	3.88	1.02 J	6.70 J	2.01 J	1.82 J	1.70 J	6.30	3.78
Silver	mg/kg	16,000	190,000	NS	84	0.221 J	< 0.139	< 0.152	0.834	0.414 J	0.500 J	1.06	0.152 J	2.00	0.978	0.680	0.910	1.11	0.948
Sodium	mg/kg	NS	NS	NS	NS	543	158	206	107 J	217	114 J	92.7 J	60.2 J	89.5 J	536	134	271	68.5 J	123
Thallium	mg/kg	32	190,000	NS	**14**	2.01 J	< 0.581	< 0.631	< 0.898	< 0.904	< 0.879	< 0.923	< 0.896	< 0.896	< 0.876	< 0.933	< 0.871	< 0.899	< 0.879
Vanadium	mg/kg	**220**	190,000	NS	**820**	36.9	39.3	29.7	35.2	40.4	34.0	47.6	18.4	40.1	32.9	44.7	44.3	29.3	47.2
Zinc	mg/kg	190,000	190,000	NS	12,000	1,230	33.2	34.6	291	40.7	57.0	340	31.7	40.0	360	33.9	44.5	168	39.4
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 2.3	< 0.0039	< 0.0044	< 0.0043	< 0.0043	< 0.0044	< 0.022	< 0.0043	< 0.0043	< 0.021	< 0.0045	< 0.0043	< 0.022	< 0.0044
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 2.9	< 0.0049	< 0.0056	< 0.0056	< 0.0055	< 0.0056	< 0.028	< 0.0055	< 0.0055	< 0.027	< 0.0057	< 0.0054	< 0.028	< 0.0056
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 5	< 0.0086	< 0.0098	< 0.0097	< 0.0096	< 0.0097	< 0.049	< 0.0096	< 0.0095	< 0.047	< 0.0099	< 0.0095	< 0.049	< 0.0097
Aroclor 1242	mg/kg	46	10,000	NS	20	< 2.1	< 0.0035	< 0.0040	< 0.0040	< 0.0039	< 0.0040	< 0.02	< 0.0040	< 0.0039	< 0.019	< 0.0041	< 0.0039	< 0.02	< 0.0040
Aroclor 1248	mg/kg	46	10,000	NS	81	< 2.1	< 0.0035	< 0.0040	< 0.0040	< 0.0039	< 0.0040	< 0.02	< 0.0040	< 0.0039	< 0.019	< 0.0041	< 0.0039	< 0.02	< 0.0040
Aroclor 1254	mg/kg	46	10,000	NS	340	< 2.1	< 0.0035	< 0.0040	0.078	< 0.0039	< 0.0040	< 0.02	< 0.0040	< 0.0039	0.52	< 0.0041	< 0.0039	< 0.02	< 0.0040
Aroclor 1260	mg/kg	**46**	190,000	NS	770	**99**	0.054	0.016 J	< 0.0059	< 0.0059	0.0096 J	0.29	< 0.0059	< 0.0058	< 0.029	< 0.0061	< 0.0058	0.3	< 0.0060
Total PCBs	mg/kg	NS	NS	NS	NS	99	0.054	0.016 J	0.078	< 0.0039	0.0096 J	0.29	< 0.0040	< 0.0039	0.52	< 0.0041	< 0.0039	0.3	< 0.0040
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 3.8	< 0.32	< 0.37	< 1.8	< 0.36	< 0.36	< 1.8	< 0.36	< 0.36	< 1.8	< 0.37	< 0.35	< 1.8	< 0.37
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.84	< 0.071	< 0.081	< 0.4	< 0.08	< 0.081	< 0.4	< 0.08	< 0.079	< 0.39	< 0.082	< 0.079	< 0.41	< 0.081
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.084	< 0.007	< 0.008	< 0.04	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.039	< 0.008	< 0.008	< 0.041	< 0.008
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L21-SB06 14-Dec-15 N 0 - 1 ft	ERM-L21-SB06 18-Jan-16 N 6 - 7 ft	ERM-L21-SB06 18-Jan-16 N 11 - 12 ft	ERM-L22-SB01 14-Oct-15 N 0 - 1 ft	ERM-L22-SB01 21-Oct-15 N 12 - 13 ft	ERM-L22-SB01 21-Oct-15 N 15 - 16 ft	ERM-L22-SB02 14-Oct-15 N 0 - 1 ft	ERM-L22-SB02 21-Oct-15 N 10 - 11 ft	ERM-L22-SB02 21-Oct-15 N 19 - 20 ft	ERM-L22-SB03 14-Oct-15 N 0 - 1 ft	ERM-L22-SB03 21-Oct-15 N 11 - 12 ft	ERM-L22-SB03 21-Oct-15 N 19 - 20 ft	ERM-L22-SB04 14-Oct-15 N 0 - 1 ft	ERM-L22-SB04 21-Oct-15 N 10 - 11 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	0.044 J	< 0.004	< 0.004	0.056 J	< 0.004	0.012 J	0.076 J	< 0.004	< 0.004	0.45	0.007 J	< 0.004	0.2	< 0.004
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 1.3	< 0.11	< 0.12	< 0.6	< 0.12	< 0.12	< 0.61	< 0.12	< 0.12	< 0.58	< 0.12	< 0.12	< 0.61	< 0.12
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.84	< 0.071	< 0.081	< 0.4	< 0.08	< 0.081	< 0.4	< 0.08	< 0.079	< 0.39	< 0.082	< 0.079	< 0.41	< 0.081
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 2.1	< 0.18	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2	< 0.2	< 0.97	< 0.2	< 0.2	< 1	< 0.2
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.042	< 0.004	< 0.004	0.22	< 0.004	0.017 J	0.13	< 0.004	< 0.004	2.1	0.42	< 0.004	1.4	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	0.048 J	< 0.004	< 0.004	0.1	< 0.004	< 0.004	0.14	< 0.004	< 0.004	0.27	< 0.004	< 0.004	0.14	< 0.004
Anthracene	mg/kg	190,000	190,000	NS	350	0.064 J	< 0.004	< 0.004	0.51	< 0.004	0.023	0.55	< 0.004	< 0.004	5.2	0.048	< 0.004	4.2	< 0.004
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.15 J	< 0.004	< 0.004	1.8	< 0.004	0.056	1.6	< 0.004	< 0.004	16	0.1	< 0.004	17	< 0.004
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.24	< 0.004	< 0.004	1.7	< 0.004	0.047	1.4	< 0.004	< 0.004	**14**	0.09	< 0.004	9.2	< 0.004
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.25	< 0.004	< 0.004	2.5	< 0.004	0.079	1.8	0.005 J	< 0.004	16	0.12	< 0.004	13	0.006 J
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.68	< 0.004	< 0.004	1.2	< 0.004	0.036	0.87	0.004 J	< 0.004	9.2	0.061	< 0.004	4.3	0.005 J
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.13 J	< 0.004	< 0.004	0.88	< 0.004	0.038	0.86	< 0.004	< 0.004	8.5	0.056	< 0.004	5.6	< 0.004
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.84	< 0.071	< 0.081	< 0.4	< 0.08	< 0.081	< 0.4	< 0.08	< 0.079	< 0.39	< 0.082	< 0.079	< 0.41	< 0.081
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.84	< 0.071	< 0.081	< 0.4	< 0.08	< 0.081	< 0.4	< 0.08	< 0.079	< 0.39	< 0.082	< 0.079	< 0.41	< 0.081
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.21	< 0.018	< 0.02	0.26	< 0.02	< 0.02	0.17 J	< 0.02	< 0.02	2.2	0.042	< 0.02	0.95	< 0.02
Chrysene	mg/kg	760	190,000	NS	230	0.23	< 0.004	< 0.004	1.8	< 0.004	0.064	1.6	0.004 J	< 0.004	15	0.1	< 0.004	15	0.006 J
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.073 J	< 0.004	< 0.004	0.25	< 0.004	0.01 J	0.19	< 0.004	< 0.004	2.3	0.017 J	< 0.004	1.1	< 0.004
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.21	< 0.018	< 0.02	0.11 J	< 0.02	< 0.02	0.17 J	< 0.02	< 0.02	0.95	0.045	< 0.02	0.95	< 0.02
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.84	< 0.071	< 0.081	< 0.4	< 0.08	< 0.081	< 0.4	< 0.08	< 0.079	< 0.39	< 0.082	< 0.079	< 0.41	< 0.081
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.84	< 0.071	< 0.081	< 0.4	< 0.08	< 0.081	< 0.4	< 0.08	< 0.079	< 0.39	< 0.082	< 0.079	< 0.41	< 0.081
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.84	< 0.071	< 0.081	< 0.4	< 0.08	< 0.081	< 0.4	< 0.08	< 0.079	< 0.39	< 0.082	< 0.079	< 0.41	< 0.081
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 2.1	< 0.18	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2	< 0.2	< 0.97	< 0.2	< 0.2	< 1	< 0.2
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.84	< 0.071	< 0.081	< 0.4	< 0.08	< 0.081	< 0.4	< 0.08	< 0.079	< 0.39	< 0.082	< 0.079	< 0.41	< 0.081
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.21 J	< 0.004	< 0.004	3.3	0.007 J	0.16	3.3	0.007 J	< 0.004	29	0.32	< 0.004	39	0.008 J
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.042	< 0.004	< 0.004	0.18	< 0.004	0.018 J	0.21	< 0.004	0.004 J	2	0.12	< 0.004	1.8	< 0.004
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.042	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	< 0.02	< 0.004	< 0.004	< 0.019	< 0.004	< 0.004	< 0.02	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 2.1	< 0.18	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2	< 0.2	< 0.97	< 0.2	< 0.2	< 1	< 0.2
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.42	< 0.036	< 0.041	< 0.2	< 0.04	< 0.04	< 0.2	< 0.04	< 0.039	< 0.19	< 0.041	< 0.039	< 0.2	< 0.041
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.19 J	< 0.004	< 0.004	1.1	< 0.004	0.034	0.77	< 0.004	< 0.004	8.3	0.049	< 0.004	4.1	0.004 J
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
Naphthalene	mg/kg	760	190,000	25	**25**	0.15 J	< 0.004	< 0.004	0.1	< 0.004	0.019 J	0.098 J	< 0.004	< 0.004	0.47	0.016 J	< 0.004	0.29	0.005 J
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.42	< 0.036	< 0.041	< 0.2	< 0.04	< 0.04	< 0.2	< 0.04	< 0.039	< 0.19	< 0.041	< 0.039	< 0.2	< 0.041
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	< 0.1	< 0.02
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.42	< 0.036	< 0.041	< 0.2	< 0.04	< 0.04	< 0.2	< 0.04	< 0.039	< 0.19	< 0.041	< 0.039	< 0.2	< 0.041
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.15 J	< 0.004	< 0.004	1.9	0.005 J	0.096	2.3	0.005 J	< 0.004	16	0.13	< 0.004	20	0.007 J
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.21	< 0.018	< 0.02	< 0.1	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.098	< 0.02	< 0.02	0.85	< 0.02
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.84	< 0.071	< 0.081	< 0.4	< 0.08	< 0.081	< 0.4	< 0.08	< 0.079	< 0.39	< 0.082	< 0.079	< 0.41	< 0.081
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.24	< 0.004	< 0.004	2.7	0.006 J	0.12	2.6	0.006 J	< 0.004	23	0.26	< 0.004	33	0.007 J
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.006	< 0.003	< 0.004	< 0.005	< 0.004	< 0.005	< 0.004	< 0.004	< 0.004	< 0.005	< 0.004	< 0.004	< 0.004	0.005 J

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L21-SB06 14-Dec-15 N 0 - 1 ft	ERM-L21-SB06 18-Jan-16 N 6 - 7 ft	ERM-L21-SB06 18-Jan-16 N 11 - 12 ft	ERM-L22-SB01 14-Oct-15 N 0 - 1 ft	ERM-L22-SB01 21-Oct-15 N 12 - 13 ft	ERM-L22-SB01 21-Oct-15 N 15 - 16 ft	ERM-L22-SB02 14-Oct-15 N 0 - 1 ft	ERM-L22-SB02 21-Oct-15 N 10 - 11 ft	ERM-L22-SB02 21-Oct-15 N 19 - 20 ft	ERM-L22-SB03 14-Oct-15 N 0 - 1 ft	ERM-L22-SB03 21-Oct-15 N 11 - 12 ft	ERM-L22-SB03 21-Oct-15 N 19 - 20 ft	ERM-L22-SB04 14-Oct-15 N 0 - 1 ft	ERM-L22-SB04 21-Oct-15 N 10 - 11 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.005	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.005	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.011	< 0.006	< 0.007	< 0.008	0.014 J	0.017 J	< 0.007	0.048	0.016 J	< 0.008	0.03	0.02	< 0.007	0.036
Benzene	mg/kg	290	330	0.13	0.5	< 0.0008	< 0.0004	< 0.0005	< 0.0006	< 0.0005	< 0.0006	< 0.0005	< 0.0005	< 0.0004	< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	0.002 J	< 0.001	< 0.001	< 0.0009	< 0.001	0.001 J	0.002 J	< 0.001	< 0.0009
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Ethanol	mg/kg	NS	NS	NS	NS	< 0.15	< 0.085	< 0.093	< 0.12	< 0.1	< 0.11	< 0.098	< 0.1	< 0.089	< 0.11	< 0.11	< 0.09	< 0.096	< 0.092
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Ethylbenzene	mg/kg	890	1,000	46	70	0.018	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Methyl bromide	mg/kg	400	460	0.54	1	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.17	< 0.093	< 0.1	< 0.13	< 0.11	< 0.12	< 0.11	< 0.11	< 0.098	< 0.13	< 0.12	< 0.099	< 0.11	< 0.1
Styrene	mg/kg	10,000	10,000	79	24	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.006	< 0.003	< 0.004	< 0.005	0.011	0.013	< 0.004	< 0.004	< 0.004	< 0.005	< 0.004	0.021	< 0.004	< 0.004
Toluene	mg/kg	10,000	10,000	44	100	< 0.002	< 0.0008	< 0.0009	0.001 J	< 0.001	0.012	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.002	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009
Xylenes	mg/kg	8,000	9,100	990	1,000	0.11	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.0009

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L22-SB04 21-Oct-15 N 19 - 20 ft	ERM-L22-SB05 14-Oct-15 N 0 - 1 ft	ERM-L22-SB05 21-Oct-15 N 7 - 8 ft	ERM-L22-SB06 14-Oct-15 N 0 - 1 ft	ERM-L22-SB06 21-Oct-15 N 10 - 11 ft	ERM-L22-SB06 21-Oct-15 N 18.5 - 19.5 ft	ERM-L23-SB01 21-Dec-15 N 0 - 1 ft	ERM-L23-SB02 21-Dec-15 N 0 - 1 ft	ERM-L23-SB02 21-Dec-15 N 13 - 14 ft	ERM-L23-SB02 21-Dec-15 N 19 - 20 ft	ERM-L23-SB03 22-Dec-15 N 0 - 1 ft	ERM-L23-SB03 19-Jan-16 N 6 - 7 ft	ERM-L23-SB03 19-Jan-16 N 8 - 9 ft	ERM-L23-SB04 22-Dec-15 N 0 - 1 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS											< 0.25			
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected		None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 5.7	< 6.4	< 7.7	< 6.1	< 6.1	< 7.3	< 5.8	< 6.1	< 6.2	< 6.2	< 6.0	< 6.0	< 6.6	< 6.6
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.19	< 0.22	< 0.28	< 0.21	< 0.21	< 0.26	< 0.21	< 0.21	< 0.22	< 0.21	< 0.20	< 0.21	< 0.23	0.25 J
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	8,840	19,700	18,900	13,300	21,600	7,950	13,300	13,900	12,300	10,300	11,500	15,600	14,500	14,800
Antimony	mg/kg	**1,300**	190,000	NS	**27**	0.787 J	< 0.528	2.40 J	0.660 J	0.754 J	< 0.579	< 0.610	< 0.637	< 0.652	< 0.651	< 2.20	1.25 J	< 0.707	< 2.64
Arsenic	mg/kg	**61**	190,000	NS	**29**	2.68	8.99	27.6	26.3	9.62	4.33	4.89	5.97	11.6	2.59	9.12	8.49	11.1	27.7
Barium	mg/kg	190,000	190,000	NS	8,200	39.6	342	132	142	95.7	39.3	72.8	58.3	54.0	33.8	92.8	105	113	151
Beryllium	mg/kg	6,400	190,000	NS	320	0.428 J	0.912	1.23	0.846	0.978	0.464 J	0.727	0.565 J	1.18	0.479 J	0.916	0.990	0.922	1.07
Cadmium	mg/kg	1,600	190,000	NS	38	0.244 J	0.814	0.337 J	0.701	< 0.0509	< 0.0608	< 0.0554	< 0.0578	< 0.0592	< 0.0591	< 0.200	0.302 J	0.0812 J	< 0.0479
Calcium	mg/kg	NS	NS	NS	NS	690	31,100	8,170	12,300	1,640	302	32,100	3,220	1,220	648	4,600	1,570	1,550	5,220
Chromium	mg/kg	190,000	190,000	NS	190,000	20.1	32.5	40.6	26.6	37.1	14.2	21.5	24.8	29.9	25.3	32.3	32.3	32.8	39.7
Cobalt	mg/kg	960	190,000	NS	160	3.39	7.12	9.47	6.14	3.73	4.97	7.37	2.96	9.60	3.27	7.57	7.06	6.98	14.9
Copper	mg/kg	120,000	190,000	NS	43,000	8.43	41.2	137	52.0	16.7	10.5	43.4	15.6	23.4	13.5	61.3	49.4	57.5	114
Iron	mg/kg	190,000	190,000	NS	NS	9,280	24,000	39,100	17,700	29,000	14,400	21,700	21,000	31,800	11,900	29,600	26,300	24,500	34,700
Lead	mg/kg	**1,000**	190,000	NS	**450**	7.19	166	125	167	12.1	4.84	100	11.1	10.6	6.43	363	379	198	331
Magnesium	mg/kg	NS	NS	NS	NS	2,290	13,100	4,240	5,880	2,520	1,700	2,830	1,900	3,130	1,720	2,340	2,830	2,410	2,960
Manganese	mg/kg	150,000	190,000	NS	**2,000**	101	394	410	334	124	173	346	108	272	88.0	229	199	153	300
Mercury	mg/kg	510	190,000	NS	**10**	0.0134 J	0.141	0.0573 J	0.221	0.0240 J	< 0.0137	0.412	< 0.0118	< 0.0118	< 0.0123	0.360	0.133	0.226	0.553
Nickel	mg/kg	64,000	190,000	NS	650	9.67	19.0	41.8	19.9	12.6	11.1	18.6	8.67	13.7	9.36	24.9	20.6	20.6	28.8
Potassium	mg/kg	NS	NS	NS	NS	1,370	2,710	2,290	1,590	1,190	1,070	2,150	910	1,510	901	1,210	1,520	1,310	1,440
Selenium	mg/kg	16,000	190,000	NS	26	< 0.933	3.66	5.22	3.14	3.82	1.51 J	0.982 J	< 0.979	1.47 J	< 1.00	1.55 J	< 1.01	< 1.10	1.38 J
Silver	mg/kg	16,000	190,000	NS	84	< 0.135	1.20	0.741 J	0.788	0.347 J	0.718	0.687	0.609	1.24	0.422 J	0.303 J	< 0.217	< 0.236	0.404 J
Sodium	mg/kg	NS	NS	NS	NS	140	205	197	165	120	86.6 J	232	92.1 J	119 J	106 J	97.1	529	353	77.0 J
Thallium	mg/kg	32	190,000	NS	**14**	< 0.843	< 0.966	< 1.15	< 0.870	< 0.888	< 1.06	7.79	6.96	11.3	7.38	< 6.12	2.93 J	2.36 J	< 7.33
Vanadium	mg/kg	**220**	190,000	NS	**820**	24.5	43.9	53.2	33.7	56.6	14.0	25.4	34.4	45.2	29.5	52.1	48.1	43.8	70.9
Zinc	mg/kg	190,000	190,000	NS	12,000	27.1	310	210	223	30.9	26.3	185	29.5	37.2	21.2	117	190	126	401
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0041	< 0.023	< 0.0055	< 0.0044	< 0.0044	< 0.0052	< 0.041	< 0.0044	< 0.0044	< 0.0044	< 0.085	< 0.022	< 0.024	< 0.95
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0052	< 0.029	< 0.0071	< 0.0056	< 0.0056	< 0.0066	< 0.053	< 0.0056	< 0.0056	< 0.0056	< 0.11	< 0.028	< 0.03	< 1.2
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.0091	< 0.051	< 0.012	< 0.0097	< 0.0097	< 0.012	< 0.092	< 0.0097	< 0.0098	< 0.0097	< 0.19	< 0.048	< 0.053	< 2.1
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0037	< 0.021	< 0.0051	< 0.0040	< 0.0040	< 0.0047	< 0.038	< 0.0040	< 0.0041	< 0.0040	< 0.078	< 0.02	< 0.022	< 0.87
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0037	< 0.021	< 0.0051	< 0.0040	< 0.0040	< 0.0047	< 0.038	< 0.0040	0.026	< 0.0040	< 0.078	< 0.02	< 0.022	< 0.87
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.0037	0.52	0.034 P	0.11	< 0.0040	< 0.0047	0.96	< 0.0040	< 0.0041	0.048	< 0.078	< 0.02	< 0.022	< 0.87
Aroclor 1260	mg/kg	**46**	190,000	NS	770	< 0.0055	< 0.031	0.031	< 0.0059	< 0.0060	< 0.0071	< 0.056	< 0.0059	< 0.0060	< 0.0060	3.8	< 0.029	0.34	42
Total PCBs	mg/kg	NS	NS	NS	NS	< 0.0037	0.52	0.065	0.11	< 0.0040	< 0.0047	0.96	< 0.0040	0.026	0.048	3.8	< 0.02	0.34	42
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.019	< 0.11	< 0.026	0.13 J	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.34	< 1.9	< 0.46	< 1.8	< 0.36	< 0.43	< 17	< 0.37	< 0.37	< 0.37	< 8.9	< 0.36	< 0.39	< 20
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.076	< 0.43	< 0.1	< 0.4	< 0.081	< 0.096	< 3.9	< 0.081	< 0.082	< 0.081	< 2	< 0.079	< 0.088	< 4.4
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.008	< 0.043	< 0.01	< 0.04	< 0.008	< 0.01	< 0.39	< 0.008	< 0.008	< 0.008	< 0.2	< 0.008	< 0.009	< 0.44
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L22-SB04 21-Oct-15 N 19 - 20 ft	ERM-L22-SB05 14-Oct-15 N 0 - 1 ft	ERM-L22-SB05 21-Oct-15 N 7 - 8 ft	ERM-L22-SB06 14-Oct-15 N 0 - 1 ft	ERM-L22-SB06 21-Oct-15 N 10 - 11 ft	ERM-L22-SB06 21-Oct-15 N 18.5 - 19.5 ft	ERM-L23-SB01 21-Dec-15 N 0 - 1 ft	ERM-L23-SB02 21-Dec-15 N 0 - 1 ft	ERM-L23-SB02 21-Dec-15 N 13 - 14 ft	ERM-L23-SB02 21-Dec-15 N 19 - 20 ft	ERM-L23-SB03 22-Dec-15 N 0 - 1 ft	ERM-L23-SB03 19-Jan-16 N 6 - 7 ft	ERM-L23-SB03 19-Jan-16 N 8 - 9 ft	ERM-L23-SB04 22-Dec-15 N 0 - 1 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	< 0.004	0.049 J	0.12	4.8	< 0.004	< 0.005	< 0.19	< 0.004	< 0.004	0.049	< 0.099	0.037	0.045	< 0.22
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.11	< 0.64	< 0.15	< 0.61	< 0.12	< 0.14	< 5.8	< 0.12	< 0.12	< 0.12	< 3	< 0.12	< 0.13	< 6.6
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.076	< 0.43	< 0.1	< 0.4	< 0.081	< 0.096	< 3.9	< 0.081	< 0.082	< 0.081	< 2	< 0.079	< 0.088	< 4.4
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.19	< 1.1	< 0.26	< 1	< 0.2	< 0.24	< 9.7	< 0.2	< 0.21	< 0.2	< 4.9	< 0.2	< 0.22	< 11
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.004	0.047 J	0.39	13	< 0.004	< 0.005	< 0.19	< 0.004	< 0.004	0.013 J	< 0.099	0.027	0.01 J	0.69 J
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.004	0.05 J	0.062	0.21	< 0.004	< 0.005	< 0.19	< 0.004	< 0.004	< 0.004	< 0.099	0.017 J	0.01 J	< 0.22
Anthracene	mg/kg	190,000	190,000	NS	350	< 0.004	0.17	0.36	31	< 0.004	< 0.005	< 0.19	< 0.004	< 0.004	0.008 J	0.18 J	0.17	0.057	2
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	< 0.004	0.68	0.66	47	< 0.004	< 0.005	< 0.19	0.007 J	< 0.004	0.008 J	0.55	0.33	0.34	7.7
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	< 0.004	0.67	0.46	**37**	< 0.004	< 0.005	0.35 J	0.012 J	0.005 J	0.013 J	0.6	0.28	0.33	7.6
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	< 0.004	0.88	0.65	45	< 0.004	< 0.005	0.38 J	0.014 J	< 0.004	0.009 J	0.67	0.42	0.45	11
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	< 0.004	0.48	0.25	19	< 0.004	< 0.005	0.4 J	0.011 J	0.005 J	0.012 J	0.37 J	0.2	0.2	5.2
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	< 0.004	0.35	0.3	14	< 0.004	< 0.005	0.23 J	0.007 J	< 0.004	0.007 J	0.34 J	0.18	0.17	4.3
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.076	< 0.43	< 0.1	< 0.4	< 0.081	< 0.096	< 3.9	< 0.081	< 0.082	< 0.081	< 2	< 0.079	< 0.088	< 4.4
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.076	< 0.43	< 0.1	< 0.4	< 0.081	< 0.096	< 3.9	< 0.081	< 0.082	< 0.081	< 2	< 0.079	< 0.088	< 4.4
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.019	< 0.11	0.28	14	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	0.029 J	< 0.022	< 1.1
Chrysene	mg/kg	760	190,000	NS	230	< 0.004	0.7	0.62	41	< 0.004	< 0.005	0.21 J	0.011 J	< 0.004	0.015 J	0.71	0.31	0.33	7.9
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	< 0.004	0.11	0.084	4.8	< 0.004	< 0.005	0.23 J	0.011 J	0.005 J	0.008 J	< 0.099	0.056	0.059	1.3
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.019	< 0.11	0.31	8.2	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	0.041	0.033 J	< 1.1
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.076	< 0.43	< 0.1	< 0.4	< 0.081	< 0.096	< 3.9	< 0.081	< 0.082	< 0.081	< 2	< 0.079	< 0.088	< 4.4
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.076	< 0.43	< 0.1	< 0.4	< 0.081	< 0.096	< 3.9	< 0.081	< 0.082	< 0.081	< 2	< 0.079	< 0.088	< 4.4
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.076	< 0.43	< 0.1	< 0.4	< 0.081	< 0.096	< 3.9	< 0.081	< 0.082	< 0.081	< 2	< 0.079	< 0.088	< 4.4
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.19	< 1.1	< 0.26	< 1	< 0.2	< 0.24	< 9.7	< 0.2	< 0.21	< 0.2	< 4.9	< 0.2	< 0.22	< 11
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.076	< 0.43	< 0.1	< 0.4	< 0.081	< 0.096	< 3.9	< 0.081	< 0.082	< 0.081	< 2	< 0.079	< 0.088	< 4.4
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.005 J	1.2	1.7	88	< 0.004	< 0.005	< 0.19	0.01 J	< 0.004	0.008 J	1	0.58	0.34	16
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.004	0.059 J	0.31	14	< 0.004	< 0.005	< 0.19	< 0.004	< 0.004	0.011 J	< 0.099	0.04	0.022 J	0.46 J
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.021	< 0.005	< 0.02	< 0.004	< 0.005	< 0.19	< 0.004	< 0.004	< 0.004	< 0.099	< 0.004	< 0.004	< 0.22
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.19	< 1.1	< 0.26	< 1	< 0.2	< 0.24	< 9.7	< 0.2	< 0.21	< 0.2	< 4.9	< 0.2	< 0.22	< 11
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.038	< 0.21	< 0.051	< 0.2	< 0.04	< 0.048	< 1.9	< 0.041	< 0.041	< 0.041	< 0.99	< 0.04	< 0.044	< 2.2
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	< 0.004	0.4	0.24	16	< 0.004	< 0.005	0.24 J	0.008 J	< 0.004	0.007 J	0.4 J	0.2	0.19	4.4
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
Naphthalene	mg/kg	760	190,000	25	**25**	< 0.004	0.088 J	0.45	13	< 0.004	< 0.005	< 0.19	0.009 J	< 0.004	0.21	< 0.099	0.031	0.034	< 0.22
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.019	< 0.11	< 0.026	< 0.1	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.038	< 0.21	< 0.051	< 0.2	< 0.04	< 0.048	< 1.9	< 0.041	< 0.041	< 0.041	< 0.99	< 0.04	< 0.044	< 2.2
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.019	< 0.11	0.034 J	0.22	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.038	< 0.21	< 0.051	< 0.2	< 0.04	< 0.048	< 1.9	< 0.041	< 0.041	< 0.041	< 0.99	< 0.04	< 0.044	< 2.2
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	< 0.004	0.68	0.8	87	< 0.004	< 0.005	< 0.19	0.006 J	< 0.004	0.026	0.66	0.42	0.19	9.5
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.019	< 0.11	< 0.026	0.15 J	< 0.02	< 0.024	< 0.97	< 0.02	< 0.021	< 0.02	< 0.49	< 0.02	< 0.022	< 1.1
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.076	< 0.43	< 0.1	< 0.4	< 0.081	< 0.096	< 3.9	< 0.081	< 0.082	< 0.081	< 2	< 0.079	< 0.088	< 4.4
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.006 J	1.1	1.4	74	0.005 J	< 0.005	< 0.19	0.011 J	< 0.004	0.013 J	0.95	0.51	0.38	15
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.004	< 0.005	0.012 J	< 0.004	0.012	< 0.005	< 0.005	< 0.004	< 0.004	< 0.004	< 0.004	< 0.005	0.012	< 0.004

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L22-SB04 21-Oct-15 N 19 - 20 ft	ERM-L22-SB05 14-Oct-15 N 0 - 1 ft	ERM-L22-SB05 21-Oct-15 N 7 - 8 ft	ERM-L22-SB06 14-Oct-15 N 0 - 1 ft	ERM-L22-SB06 21-Oct-15 N 10 - 11 ft	ERM-L22-SB06 21-Oct-15 N 18.5 - 19.5 ft	ERM-L23-SB01 21-Dec-15 N 0 - 1 ft	ERM-L23-SB02 21-Dec-15 N 0 - 1 ft	ERM-L23-SB02 21-Dec-15 N 13 - 14 ft	ERM-L23-SB02 21-Dec-15 N 19 - 20 ft	ERM-L23-SB03 22-Dec-15 N 0 - 1 ft	ERM-L23-SB03 19-Jan-16 N 6 - 7 ft	ERM-L23-SB03 19-Jan-16 N 8 - 9 ft	ERM-L23-SB04 22-Dec-15 N 0 - 1 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.004	< 0.004	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.004	< 0.004	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.027	< 0.009	0.07	0.008 J	0.1	0.015 J	< 0.008	< 0.007	< 0.006	0.022	< 0.007	< 0.008	0.087	< 0.007
Benzene	mg/kg	290	330	0.13	0.5	< 0.0004	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0007	< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.0009	< 0.001	0.003 J	< 0.001	0.003 J	0.008	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.003	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Ethanol	mg/kg	NS	NS	NS	NS	< 0.088	< 0.13	< 0.13	3.1	< 0.094	< 0.13	< 0.12	< 0.094	< 0.09	< 0.1	< 0.1	< 0.12	< 0.091	< 0.1
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.003	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.003	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.003	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.003	< 0.003	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.097	< 0.15	< 0.14	< 0.12	< 0.1	< 0.14	< 0.13	< 0.1	< 0.099	< 0.11	< 0.11	< 0.13	< 0.1	< 0.11
Styrene	mg/kg	10,000	10,000	79	24	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	0.46	< 0.005	0.074	< 0.004	< 0.004	< 0.005	< 0.005	< 0.004	< 0.004	< 0.004	< 0.004	< 0.005	< 0.004	< 0.004
Toluene	mg/kg	10,000	10,000	44	100	< 0.0009	< 0.001	0.012	< 0.001	< 0.0009	0.005 J	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.0009	< 0.001	< 0.001	< 0.001	< 0.0009	< 0.001	< 0.001	0.003 J	< 0.0009	0.006	< 0.001	< 0.001	< 0.0009	0.001 J

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

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East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L23-SB04 19-Jan-16 N 6 - 7 ft	ERM-L23-SB04 19-Jan-16 N 9 - 10 ft	ERM-L23-SB05 22-Dec-15 N 0 - 1 ft	ERM-L23-SB05 19-Jan-16 N 7 - 8 ft	ERM-L23-SB05 19-Jan-16 N 10 - 11 ft	ERM-L23-SB06 21-Dec-15 N 0 - 1 ft	ERM-L23-SB07 21-Dec-15 N 0 - 1 ft	ERM-L23-SB08 21-Dec-15 N 0 - 1 ft	ERM-L23-SB08 22-Dec-15 N 13 - 14 ft	ERM-L24-SB01 14-Oct-15 N 0 - 1 ft	ERM-L24-SB01 21-Oct-15 N 9 - 10 ft	ERM-L24-SB01 21-Oct-15 N 17 - 18 ft	ERM-L24-SB02 14-Oct-15 N 0 - 1 ft	ERM-L24-SB02 21-Oct-15 N 12.5 - 13.5 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS									0.5				< 0.25	
Asbestos, Amosite	%	NS	NS	NS	NS									< 0.25					
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected		None Detected	None Detected	None Detected		None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 6.0	< 6.0	< 6.5	< 5.9	< 6.0	< 6.1	< 5.8	< 6.9	< 6.0	< 5.8	< 6.1	< 6.0	< 5.9	< 6.3
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.22	< 0.21	< 0.22	< 0.21	< 0.21	< 0.21	< 0.21	0.27 J	< 0.21	< 0.21	0.22 J	< 0.21	< 0.21	< 0.22
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	12,200	13,600	12,300	22,600	22,700	17,800	15,600	15,900	12,100	19,100	20,500	19,900	11,200	11,500
Antimony	mg/kg	**1,300**	190,000	NS	**27**	< 0.627	< 0.628	< 0.596	< 0.618	< 0.630	< 0.648	< 0.601	< 0.724	2.40	< 0.465	1.05 J	1.03 J	**59.8**	< 0.503
Arsenic	mg/kg	**61**	190,000	NS	**29**	6.24	5.80	6.96	1.67 J	3.57	6.15	6.13	5.62	5.56	3.20	1.48 J	3.93	3.84	2.41 J
Barium	mg/kg	190,000	190,000	NS	8,200	69.9	88.4	97.3	68.2	105	204	243	360	455	215	55.2	66.2	137	44.5
Beryllium	mg/kg	6,400	190,000	NS	320	0.820	0.838	0.734	0.759	0.974	0.968	0.798	0.571 J	0.652	0.864	0.849	0.874	0.794	0.628
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.0569	0.0639 J	0.270 J	0.902	< 0.0572	1.35	1.56	1.93	1.69	0.563 J	< 0.0512	< 0.0507	0.687	< 0.0527
Calcium	mg/kg	NS	NS	NS	NS	1,410	2,110	3,950	1,220	808	6,170	9,330	8,890	75,700	7,090	2,110	693	39,300	308
Chromium	mg/kg	190,000	190,000	NS	190,000	28.5	28.4	26.2	35.2	41.0	48.5	55.2	70.2	150	50.1	32.0	32.4	29.9	16.5
Cobalt	mg/kg	960	190,000	NS	160	7.93	6.18	6.17	6.77	8.35	8.92	9.28	15.9	7.66	11.6	4.55	9.38	6.06	5.99
Copper	mg/kg	120,000	190,000	NS	43,000	49.9	69.7	61.4	16.8	24.2	51.8	76.4	92.9	71.1	121	20.5	20.9	140	13.1
Iron	mg/kg	190,000	190,000	NS	NS	22,600	18,500	19,900	9,170	13,000	28,300	28,500	36,800	26,200	28,300	25,800	21,500	16,800	12,500
Lead	mg/kg	**1,000**	190,000	NS	**450**	47.8	75.1	86.3	13.9	14.6	46.1	129	56.9	343	87.6	10.9	12.0	**1,750**	4.48
Magnesium	mg/kg	NS	NS	NS	NS	2,520	2,220	2,890	2,260	3,720	5,770	7,880	11,100	10,600	8,940	2,560	3,150	19,100	2,060
Manganese	mg/kg	150,000	190,000	NS	**2,000**	236	252	164	65.2	111	340	311	372	326	360	237	150	508	91.8
Mercury	mg/kg	510	190,000	NS	**10**	< 0.0114	0.0610 J	0.291	0.0352 J	0.0971 J	0.139	0.471	0.156	0.142	0.0561 J	0.0247 J	0.0194 J	0.257	0.0147 J
Nickel	mg/kg	64,000	190,000	NS	650	15.0	13.0	21.2	21.5	21.2	26.1	28.5	47.4	34.5	39.4	12.2	19.3	37.5	17.3
Potassium	mg/kg	NS	NS	NS	NS	1,320	1,060	1,520	1,140	1,070	4,300	4,640	8,550	2,440	5,730	1,400	1,370	2,400	1,110
Selenium	mg/kg	16,000	190,000	NS	26	< 1.95	< 0.977	< 0.927	< 0.962	< 0.980	< 1.01	< 0.935	< 1.13	< 0.973	5.22	3.10	2.14 J	3.01	1.04 J
Silver	mg/kg	16,000	190,000	NS	84	< 0.209	< 0.209	0.275 J	< 0.206	< 0.210	0.343 J	0.604	1.00	< 0.209	1.47	0.463 J	0.295 J	1.12	0.237 J
Sodium	mg/kg	NS	NS	NS	NS	197	77.4 J	90.8 J	163	159	186	176	354	483	171	206	2,130	229	476
Thallium	mg/kg	32	190,000	NS	**14**	2.29 J	1.96 J	< 4.14	1.68 J	2.22 J	< 0.900	< 0.834	< 1.01	1.34 J	1.92 J	< 0.893	< 0.884	< 0.872	< 0.919
Vanadium	mg/kg	**220**	190,000	NS	**820**	42.3	36.8	39.6	40.2	51.8	63.6	63.2	81.7	37.7	68.3	44.4	38.9	48.2	20.5
Zinc	mg/kg	190,000	190,000	NS	12,000	124	126	208	602	109	123	259	443	690	169	35.2	50.5	213	27.2
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0043	< 0.022	< 0.047	< 0.0042	< 0.0043	< 0.022	< 0.042	< 0.025	< 0.21	< 0.042	< 0.0044	< 0.0043	< 0.0042	< 0.0045
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0054	< 0.028	< 0.06	< 0.0054	< 0.0055	< 0.028	< 0.053	< 0.032	< 0.27	< 0.054	< 0.0056	< 0.0055	< 0.0053	< 0.0058
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.0095	< 0.048	< 0.1	< 0.0093	< 0.0096	< 0.048	< 0.093	< 0.055	< 0.48	< 0.093	< 0.0097	< 0.0095	< 0.0093	< 0.01
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0039	< 0.02	< 0.043	< 0.0038	< 0.0039	< 0.02	< 0.038	< 0.023	< 0.2	< 0.038	< 0.0040	< 0.0039	< 0.0038	< 0.0041
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0039	< 0.02	< 0.043	< 0.0038	< 0.0039	< 0.02	< 0.038	< 0.023	< 0.2	< 0.038	< 0.0040	< 0.0039	< 0.0038	< 0.0041
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.0039	< 0.02	< 0.043	< 0.0038	< 0.0039	< 0.02	< 0.038	< 0.023	9.8	0.075 J	< 0.0040	< 0.0039	0.14	< 0.0041
Aroclor 1260	mg/kg	**46**	190,000	NS	770	0.24 P	1.1 P	0.72	< 0.0057	< 0.0059	0.32	1.1	0.84	< 0.29	< 0.057	< 0.0059	< 0.0058	0.12	< 0.0061
Total PCBs	mg/kg	NS	NS	NS	NS	0.24	1.1	0.72	< 0.0038	< 0.0039	0.32	1.1	0.84	9.8	0.075 J	< 0.0040	< 0.0039	0.26	< 0.0041
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.36	< 0.36	< 9.6	< 0.35	< 0.36	< 1.8	< 1.7	< 2	< 3.6	< 1.8	< 0.36	< 0.36	< 3.5	< 0.38
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.079	< 0.08	< 2.1	< 0.078	< 0.08	< 0.4	< 0.39	< 0.45	< 0.79	< 0.39	< 0.08	< 0.08	< 0.78	< 0.084
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.008	< 0.008	< 0.21	< 0.008	< 0.008	< 0.04	< 0.039	< 0.045	< 0.079	< 0.039	< 0.008	< 0.008	< 0.078	< 0.008
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L23-SB04 19-Jan-16 N 6 - 7 ft	ERM-L23-SB04 19-Jan-16 N 9 - 10 ft	ERM-L23-SB05 22-Dec-15 N 0 - 1 ft	ERM-L23-SB05 19-Jan-16 N 7 - 8 ft	ERM-L23-SB05 19-Jan-16 N 10 - 11 ft	ERM-L23-SB06 21-Dec-15 N 0 - 1 ft	ERM-L23-SB07 21-Dec-15 N 0 - 1 ft	ERM-L23-SB08 21-Dec-15 N 0 - 1 ft	ERM-L23-SB08 22-Dec-15 N 13 - 14 ft	ERM-L24-SB01 14-Oct-15 N 0 - 1 ft	ERM-L24-SB01 21-Oct-15 N 9 - 10 ft	ERM-L24-SB01 21-Oct-15 N 17 - 18 ft	ERM-L24-SB02 14-Oct-15 N 0 - 1 ft	ERM-L24-SB02 21-Oct-15 N 12.5 - 13.5 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	0.04	0.11	< 0.11	< 0.004	< 0.004	0.045 J	0.039 J	< 0.023	8.1	0.021 J	< 0.004	< 0.004	< 0.039	< 0.004
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.12	< 0.12	< 3.2	< 0.12	< 0.12	< 0.6	< 0.58	< 0.68	< 1.2	< 0.58	< 0.12	< 0.12	< 1.2	< 0.13
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.079	< 0.08	< 2.1	< 0.078	< 0.08	< 0.4	< 0.39	< 0.45	< 0.79	< 0.39	< 0.08	< 0.08	< 0.78	< 0.084
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.2	< 0.2	< 5.4	< 0.2	< 0.2	< 1	< 0.96	< 1.1	< 2	< 0.97	< 0.2	< 0.2	< 2	< 0.21
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	0.088	0.27	< 0.11	< 0.004	< 0.004	0.081 J	0.17	0.047 J	18	< 0.019	0.004 J	< 0.004	< 0.039	< 0.004
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.004	0.019 J	< 0.11	< 0.004	< 0.004	0.057 J	0.07 J	0.069 J	0.64	< 0.019	< 0.004	< 0.004	< 0.039	< 0.004
Anthracene	mg/kg	190,000	190,000	NS	350	0.17	0.59	0.15 J	< 0.004	< 0.004	0.28	0.53	0.19	37	< 0.019	< 0.004	< 0.004	< 0.039	< 0.004
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	0.22	1.1	0.44 J	< 0.004	< 0.004	0.79	2.2	0.51	57	0.053 J	< 0.004	< 0.004	0.087 J	< 0.004
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	0.21	1	0.43 J	0.15	< 0.004	0.62	2.5	0.59	**60**	0.035 J	< 0.004	< 0.004	0.11 J	< 0.004
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	0.29	1.4	0.57	< 0.004	< 0.004	0.87	3.7	0.83	82	0.08 J	< 0.004	< 0.004	0.13 J	< 0.004
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	0.12	0.71	0.32 J	< 0.004	< 0.004	0.41	1.7	0.43	41	0.061 J	< 0.004	< 0.004	0.18 J	< 0.004
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	0.12	0.67	0.22 J	< 0.004	< 0.004	0.35	1.2	0.34	30	< 0.019	< 0.004	< 0.004	0.041 J	< 0.004
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.079	< 0.08	< 2.1	< 0.078	< 0.08	< 0.4	< 0.39	< 0.45	< 0.79	< 0.39	< 0.08	< 0.08	< 0.78	< 0.084
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.079	< 0.08	< 2.1	< 0.078	< 0.08	< 0.4	< 0.39	1.4	< 0.79	< 0.39	< 0.08	< 0.08	< 0.78	< 0.084
Carbazole	mg/kg	4,600	190,000	NS	110	0.099	0.34	< 0.54	< 0.02	< 0.02	0.16 J	0.3	< 0.11	18	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
Chrysene	mg/kg	760	190,000	NS	230	0.2	1.1	0.5 J	0.004 J	< 0.004	0.79	2	0.55	53	0.078 J	< 0.004	< 0.004	0.13 J	< 0.004
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	0.031	0.16	0.14 J	< 0.004	< 0.004	0.086 J	0.33	0.093 J	8.1	< 0.019	< 0.004	< 0.004	0.04 J	< 0.004
Dibenzofuran	mg/kg	3,200	190,000	NS	310	0.052	0.17	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	15	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.079	< 0.08	< 2.1	< 0.078	< 0.08	< 0.4	< 0.39	< 0.45	< 0.79	< 0.39	< 0.08	< 0.08	< 0.78	< 0.084
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.079	< 0.08	< 2.1	< 0.078	< 0.08	< 0.4	< 0.39	< 0.45	< 0.79	< 0.39	< 0.08	< 0.08	< 0.78	< 0.084
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.079	< 0.08	< 2.1	< 0.078	< 0.08	< 0.4	< 0.39	< 0.45	< 0.79	< 0.39	< 0.08	< 0.08	< 0.78	< 0.084
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.2	< 0.2	< 5.4	< 0.2	< 0.2	< 1	< 0.96	< 1.1	< 2	< 0.97	< 0.2	< 0.2	< 2	< 0.21
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.079	< 0.08	< 2.1	< 0.078	< 0.08	< 0.4	< 0.39	< 0.45	< 0.79	< 0.39	< 0.08	< 0.08	< 0.78	< 0.084
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	0.51	2.5	0.82	< 0.004	< 0.004	1.9	4.8	1.2	160	0.085 J	< 0.004	< 0.004	0.13 J	< 0.004
Fluorene	mg/kg	130,000	190,000	NS	3,800	0.079	0.24	< 0.11	< 0.004	< 0.004	0.099 J	0.15	0.052 J	21	< 0.019	< 0.004	< 0.004	< 0.039	< 0.004
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.004	< 0.11	< 0.004	< 0.004	< 0.02	< 0.019	< 0.023	< 0.039	< 0.019	< 0.004	< 0.004	< 0.039	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.2	< 0.2	< 5.4	< 0.2	< 0.2	< 1	< 0.96	< 1.1	< 2	< 0.97	< 0.2	< 0.2	< 2	< 0.21
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.04	< 0.04	< 1.1	< 0.039	< 0.04	< 0.2	< 0.19	< 0.23	< 0.4	< 0.19	< 0.04	< 0.04	< 0.39	< 0.042
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	0.12	0.69	0.27 J	< 0.004	< 0.004	0.33	1.5	0.36	35	0.036 J	< 0.004	< 0.004	0.086 J	< 0.004
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
Naphthalene	mg/kg	760	190,000	25	**25**	0.17	0.45	< 0.11	< 0.004	< 0.004	0.071 J	0.069 J	0.026 J	**29**	< 0.019	0.008 J	< 0.004	< 0.039	< 0.004
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.04	< 0.04	< 1.1	< 0.039	< 0.04	< 0.2	< 0.19	< 0.23	< 0.4	< 0.19	< 0.04	< 0.04	< 0.39	< 0.042
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.02	0.021 J	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.04	< 0.04	< 1.1	< 0.039	< 0.04	< 0.2	< 0.19	< 0.23	< 0.4	< 0.19	< 0.04	< 0.04	< 0.39	< 0.042
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	0.58	2.3	0.59	< 0.004	< 0.004	1.1	2.2	0.71	140	0.052 J	< 0.004	< 0.004	0.093 J	< 0.004
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.02	< 0.02	< 0.54	< 0.02	< 0.02	< 0.1	< 0.096	< 0.11	< 0.2	< 0.097	< 0.02	< 0.02	< 0.2	< 0.021
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.079	< 0.08	< 2.1	< 0.078	< 0.08	< 0.4	< 0.39	< 0.45	< 0.79	< 0.39	< 0.08	< 0.08	< 0.78	< 0.084
Pyrene	mg/kg	96,000	190,000	NS	2,200	0.45	2.2	0.77	0.006 J	< 0.004	1.5	4	0.99	120	0.086 J	< 0.004	< 0.004	0.13 J	< 0.004
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.004	< 0.004	< 0.005	0.005 J	< 0.003	< 0.004	< 0.004	< 0.005	< 0.23	< 0.004	0.011	< 0.003	< 0.004	< 0.004

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L23-SB04 19-Jan-16 N 6 - 7 ft	ERM-L23-SB04 19-Jan-16 N 9 - 10 ft	ERM-L23-SB05 22-Dec-15 N 0 - 1 ft	ERM-L23-SB05 19-Jan-16 N 7 - 8 ft	ERM-L23-SB05 19-Jan-16 N 10 - 11 ft	ERM-L23-SB06 21-Dec-15 N 0 - 1 ft	ERM-L23-SB07 21-Dec-15 N 0 - 1 ft	ERM-L23-SB08 21-Dec-15 N 0 - 1 ft	ERM-L23-SB08 22-Dec-15 N 13 - 14 ft	ERM-L24-SB01 14-Oct-15 N 0 - 1 ft	ERM-L24-SB01 21-Oct-15 N 9 - 10 ft	ERM-L24-SB01 21-Oct-15 N 17 - 18 ft	ERM-L24-SB02 14-Oct-15 N 0 - 1 ft	ERM-L24-SB02 21-Oct-15 N 12.5 - 13.5 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.003	< 0.004	< 0.003	< 0.002	< 0.003	< 0.003	< 0.004	< 0.17	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.003	< 0.004	< 0.003	< 0.002	< 0.003	< 0.003	< 0.004	< 0.17	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	< 0.006	< 0.007	< 0.008	0.026	0.015 J	< 0.006	< 0.007	< 0.009	< 0.4	< 0.007	0.07	0.031	< 0.008	0.013 J
Benzene	mg/kg	290	330	0.13	0.5	< 0.0004	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0004	< 0.0005	< 0.0006	< 0.028	< 0.0005	< 0.0005	< 0.0004	< 0.0005	< 0.0005
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Carbon disulfide	mg/kg	10,000	10,000	530	620	< 0.0009	< 0.0009	0.002 J	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	0.051	0.032	< 0.001	0.016
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.11	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Ethanol	mg/kg	NS	NS	NS	NS	< 0.089	< 0.094	< 0.12	< 0.086	< 0.083	0.3 J	< 0.095	< 0.13	< 5.7	< 0.099	< 0.093	< 0.085	< 0.11	< 0.092
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.11	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.11	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.11	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.11	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.097	< 0.1	< 0.13	< 0.095	< 0.091	< 0.099	< 0.1	< 0.14	< 6.3	< 0.11	< 0.1	< 0.094	< 0.12	< 0.1
Styrene	mg/kg	10,000	10,000	79	24	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.004	< 0.004	< 0.005	< 0.003	< 0.003	< 0.004	< 0.004	< 0.005	< 0.23	< 0.004	< 0.004	< 0.003	< 0.004	< 0.004
Toluene	mg/kg	10,000	10,000	44	100	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0008	< 0.0009	< 0.001	< 0.001	< 0.057	< 0.001	< 0.0009	< 0.0009	< 0.001	< 0.0009

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L24-SB02 21-Oct-15 N 17 - 18 ft	ERM-L24-SB03 15-Oct-15 N 0 - 1 ft	ERM-L24-SB03 21-Oct-15 N 7 - 8 ft	ERM-L24-SB03 21-Oct-15 N 11 - 12 ft	ERM-L24-SB04 15-Oct-15 N 0 - 1 ft	ERM-L24-SB04 21-Oct-15 N 6 - 7 ft	ERM-L24-SB04 21-Oct-15 N 19 - 20 ft	ERM-L24-SB05 15-Oct-15 N 0 - 1 ft	ERM-L24-SB05 21-Oct-15 N 11 - 12 ft	ERM-L24-SB05 21-Oct-15 N 15 - 16 ft	ERM-L24-SB06 15-Oct-15 N 0 - 1 ft	ERM-L24-SB06 21-Oct-15 N 5 - 7 ft	ERM-L24-SB06 21-Oct-15 N 17 - 18 ft	ERM-L24-SB07 15-Oct-15 N 0 - 1 ft
Asbestos																			
Asbestos, Chrysotile	%	NS	NS	NS	NS						< 0.25								
Asbestos, Amosite	%	NS	NS	NS	NS														
Asbestos	%	NS	NS	NS	NS	None Detected	None Detected	None Detected	None Detected	None Detected		None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected
Ethylene glycol by SW8015																			
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	< 5.9	< 5.8	< 6.1	< 6.5	< 5.7	< 5.6	< 5.6	< 6.3	< 6.3	< 6.8	< 5.4	< 7.0	< 5.7	< 5.8
Metals																			
Cyanide	mg/kg	1,900	190,000	NS	200	< 0.21	< 0.21	< 0.22	< 0.22	< 0.20	< 0.20	< 0.20	< 0.23	0.30 J	< 0.24	< 0.19	0.45 J	< 0.21	< 0.20
Metals, Total																			
Aluminum	mg/kg	190,000	190,000	NS	NS	28,500	29,600	12,600	11,900	37,200	18,700	6,180	33,500	16,800	18,000	13,600	16,500	4,250	25,900
Antimony	mg/kg	**1,300**	190,000	NS	**27**	< 0.473	< 0.459	0.597 J	< 0.525	< 0.454	2.55	0.614 J	< 0.497	1.00 J	< 0.555	< 0.426	11.1	2.05 J	< 0.460
Arsenic	mg/kg	**61**	190,000	NS	**29**	4.02	2.97	11.3	3.36	4.56	9.19	4.15	2.56	13.2	8.76	1.36 J	24.0	3.59	0.713 J
Barium	mg/kg	190,000	190,000	NS	8,200	211	167	51.4	45.4	241	169	24.5	104	140	94.1	324	261	21.8	183
Beryllium	mg/kg	6,400	190,000	NS	320	1.44	1.40	1.30	0.625 J	1.69	1.36	0.574	2.14	1.16	1.09	0.589	2.62	0.917	1.41
Cadmium	mg/kg	1,600	190,000	NS	38	< 0.0497	0.483 J	< 0.0522	< 0.0550	0.770	0.429 J	< 0.0472	0.352 J	0.394 J	0.115 J	0.688	5.91	< 0.0484	0.433 J
Calcium	mg/kg	NS	NS	NS	NS	1,310	7,540	790	909	4,280	3,090	296	6,910	27,400	3,420	15,600	28,100	251	9,890
Chromium	mg/kg	190,000	190,000	NS	190,000	42.4	41.7	36.7	24.0	89.6	39.8	19.9	54.3	32.3	34.6	39.8	43.1	11.1	48.5
Cobalt	mg/kg	960	190,000	NS	160	29.7	12.7	8.27	5.78	18.1	8.20	3.54	16.2	5.23	8.10	11.4	12.0	9.14	12.7
Copper	mg/kg	120,000	190,000	NS	43,000	40.6	49.8	19.4	16.3	60.9	116	10.4	53.7	55.9	42.2	93.0	171	7.22	56.3
Iron	mg/kg	190,000	190,000	NS	NS	31,600	28,300	44,600	19,000	33,900	32,200	25,200	40,900	22,200	26,100	26,700	33,800	72,000	36,600
Lead	mg/kg	**1,000**	190,000	NS	**450**	6.30	20.2	10.6	9.98	26.1	232	5.22	19.0	124	63.7	33.9	**632**	6.96	29.8
Magnesium	mg/kg	NS	NS	NS	NS	11,700	8,650	2,500	2,390	10,400	2,950	1,160	4,680	6,900	3,870	12,600	5,400	806	10,800
Manganese	mg/kg	150,000	190,000	NS	**2,000**	**2,260**	433	162	133	480	163	97.3	279	510	275	307	468	299	686
Mercury	mg/kg	510	190,000	NS	**10**	< 0.0115	0.0312 J	0.0406 J	0.0246 J	0.0691 J	0.461	< 0.0109	0.0412 J	0.458	0.214	0.0590 J	1.65	< 0.0112	0.155
Nickel	mg/kg	64,000	190,000	NS	650	55.1	25.1	16.3	15.3	93.1	39.4	8.41	36.9	18.8	18.2	34.9	53.9	10.0	36.6
Potassium	mg/kg	NS	NS	NS	NS	6,600	6,540	986	1,200	6,760	2,350	825	1,600	1,950	1,750	6,830	2,550	653	5,240
Selenium	mg/kg	16,000	190,000	NS	26	3.63	4.00	8.71	1.96 J	4.79	4.83	4.34	7.95	2.66	2.48 J	5.28	5.47	12.2	6.30
Silver	mg/kg	16,000	190,000	NS	84	0.933	1.55	0.648	0.358 J	1.70	1.34	0.827	1.51	1.16	0.952	1.95	4.30	0.952	1.66
Sodium	mg/kg	NS	NS	NS	NS	636	92.0 J	113 J	194	107 J	154	174	242	581	351	214	433	70.7 J	156
Thallium	mg/kg	32	190,000	NS	**14**	0.902 J	1.85 J	< 0.910	< 0.960	2.04 J	< 0.822	< 0.823	< 0.908	< 0.927	< 1.01	2.38 J	< 1.02	2.80 J	1.41 J
Vanadium	mg/kg	**220**	190,000	NS	**820**	49.0	56.5	67.1	31.3	68.1	51.9	18.3	81.7	49.8	52.9	76.7	51.7	9.77	68.2
Zinc	mg/kg	190,000	190,000	NS	12,000	73.9	82.7	40.2	81.6	81.7	226	20.2	59.2	205	131	122	2,930	28.7	84.6
PCBs by SW8082																			
Aroclor 1016	mg/kg	46	10,000	NS	47	< 0.0042	< 0.0041	< 0.0044	< 0.0047	< 0.0040	< 0.02	< 0.0040	< 0.0045	< 0.0045	< 0.0049	< 0.0038	< 0.025	< 0.0041	< 0.0042
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	< 0.0053	< 0.0053	< 0.0056	< 0.0060	< 0.0052	< 0.025	< 0.0051	< 0.0058	< 0.0057	< 0.0062	< 0.0049	< 0.032	< 0.0052	< 0.0053
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	< 0.0093	< 0.0092	< 0.0097	< 0.01	< 0.0090	< 0.044	< 0.0090	< 0.01	< 0.01	< 0.011	< 0.0085	< 0.056	< 0.0091	< 0.0092
Aroclor 1242	mg/kg	46	10,000	NS	20	< 0.0038	< 0.0038	< 0.0040	< 0.0043	< 0.0037	< 0.018	< 0.0037	< 0.0041	< 0.0041	< 0.0045	< 0.0035	< 0.023	< 0.0037	< 0.0038
Aroclor 1248	mg/kg	46	10,000	NS	81	< 0.0038	< 0.0038	< 0.0040	< 0.0043	< 0.0037	< 0.018	< 0.0037	< 0.0041	0.018 J	< 0.0045	< 0.0035	< 0.023	< 0.0037	< 0.0038
Aroclor 1254	mg/kg	46	10,000	NS	340	< 0.0038	0.019 J	< 0.0040	0.015 J	0.0098 J	0.18	< 0.0037	0.059	0.068	0.051	< 0.0035	0.53	< 0.0037	0.052
Aroclor 1260	mg/kg	**46**	190,000	NS	770	< 0.0057	< 0.0056	< 0.0059	< 0.0064	0.0093 J	0.15	< 0.0055	0.071	0.042	0.032	0.034	< 0.034	< 0.0056	0.067
Total PCBs	mg/kg	NS	NS	NS	NS	< 0.0038	0.019 J	< 0.0040	0.015 J	0.019 J	0.33	< 0.0037	0.13	0.13	0.083	0.034	0.53	< 0.0037	0.12
SVOCs by SW8270C																			
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	0.034 J	< 0.023	< 0.45	0.041 J	< 0.019	< 0.096
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
1,4-Dichlorobenzene	mg/kg	200	230	10	10	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	0.14	< 0.019	< 0.096
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	< 0.35	< 1.7	< 0.37	< 0.39	< 1.7	< 0.33	< 0.33	< 1.9	< 0.37	< 0.41	< 8.1	< 0.42	< 0.34	< 1.7
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	< 0.078	< 0.38	< 0.081	< 0.086	< 0.38	< 0.074	< 0.074	< 0.41	< 0.083	< 0.09	< 1.8	< 0.092	< 0.076	< 0.38
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	< 0.008	< 0.038	< 0.008	< 0.009	< 0.038	< 0.007	< 0.007	< 0.041	< 0.008	< 0.009	< 0.18	< 0.009	< 0.008	< 0.038
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L24-SB02 21-Oct-15 N 17 - 18 ft	ERM-L24-SB03 15-Oct-15 N 0 - 1 ft	ERM-L24-SB03 21-Oct-15 N 7 - 8 ft	ERM-L24-SB03 21-Oct-15 N 11 - 12 ft	ERM-L24-SB04 15-Oct-15 N 0 - 1 ft	ERM-L24-SB04 21-Oct-15 N 6 - 7 ft	ERM-L24-SB04 21-Oct-15 N 19 - 20 ft	ERM-L24-SB05 15-Oct-15 N 0 - 1 ft	ERM-L24-SB05 21-Oct-15 N 11 - 12 ft	ERM-L24-SB05 21-Oct-15 N 15 - 16 ft	ERM-L24-SB06 15-Oct-15 N 0 - 1 ft	ERM-L24-SB06 21-Oct-15 N 5 - 7 ft	ERM-L24-SB06 21-Oct-15 N 17 - 18 ft	ERM-L24-SB07 15-Oct-15 N 0 - 1 ft
2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	< 0.004	< 0.019	< 0.004	< 0.004	< 0.019	0.12	< 0.004	< 0.021	0.31	0.097	< 0.09	1.3	< 0.004	0.021 J
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.12	< 0.57	< 0.12	< 0.13	< 0.57	< 0.11	< 0.11	< 0.62	< 0.12	< 0.14	< 2.7	< 0.14	< 0.11	< 0.57
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.078	< 0.38	< 0.081	< 0.086	< 0.38	< 0.074	< 0.074	< 0.41	< 0.083	< 0.09	< 1.8	< 0.092	< 0.076	< 0.38
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.19	< 0.95	< 0.2	< 0.21	< 0.95	< 0.18	< 0.19	< 1	< 0.21	< 0.23	< 4.5	< 0.23	< 0.19	< 0.96
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	< 0.004	< 0.019	< 0.004	< 0.004	< 0.019	0.024	< 0.004	< 0.021	0.15	0.042	< 0.09	2.4	< 0.004	0.027 J
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	< 0.004	< 0.019	< 0.004	< 0.004	< 0.019	0.072	< 0.004	< 0.021	0.059	0.022 J	< 0.09	0.42	0.005 J	< 0.019
Anthracene	mg/kg	190,000	190,000	NS	350	< 0.004	< 0.019	< 0.004	< 0.004	< 0.019	0.14	< 0.004	0.056 J	0.28	0.081	0.12 J	4	0.005 J	0.067 J
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	< 0.004	0.037 J	< 0.004	< 0.004	0.07 J	0.38	< 0.004	0.26	0.55	0.15	0.63	4.6	0.005 J	0.27
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	< 0.004	0.042 J	< 0.004	< 0.004	0.086 J	0.37	< 0.004	0.28	0.42	0.13	0.75	3.3	< 0.004	0.27
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	< 0.004	0.049 J	< 0.004	< 0.004	0.11	0.79	< 0.004	0.43	0.63	0.18	1.1	4.2	< 0.004	0.32
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	< 0.004	0.038 J	< 0.004	< 0.004	0.1	0.35	< 0.004	0.24	0.26	0.088	0.71	2	< 0.004	0.25
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	< 0.004	0.023 J	< 0.004	< 0.004	0.05 J	0.32	< 0.004	0.15	0.25	0.097	0.39 J	2.1	< 0.004	0.17
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.078	< 0.38	< 0.081	< 0.086	< 0.38	< 0.074	< 0.074	< 0.41	< 0.083	< 0.09	< 1.8	< 0.092	< 0.076	< 0.38
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.078	< 0.38	< 0.081	< 0.086	< 0.38	0.088 J	< 0.074	< 0.41	< 0.083	< 0.09	< 1.8	0.27	< 0.076	< 0.38
Carbazole	mg/kg	4,600	190,000	NS	110	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	0.061	< 0.019	< 0.1	0.086	0.026 J	< 0.45	1.4	< 0.019	< 0.096
Chrysene	mg/kg	760	190,000	NS	230	< 0.004	0.028 J	< 0.004	< 0.004	0.09 J	0.54	< 0.004	0.29	0.63	0.17	0.81	4.4	< 0.004	0.28
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	< 0.004	< 0.019	< 0.004	< 0.004	0.037 J	0.12	< 0.004	0.079 J	0.079	0.027	0.2 J	0.61	< 0.004	0.09 J
Dibenzofuran	mg/kg	3,200	190,000	NS	310	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	0.068	< 0.019	< 0.1	0.18	0.057	< 0.45	2	< 0.019	< 0.096
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.078	< 0.38	< 0.081	< 0.086	< 0.38	< 0.074	< 0.074	< 0.41	< 0.083	< 0.09	< 1.8	< 0.092	< 0.076	< 0.38
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.078	< 0.38	< 0.081	< 0.086	< 0.38	< 0.074	< 0.074	< 0.41	< 0.083	< 0.09	< 1.8	< 0.092	< 0.076	< 0.38
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.078	< 0.38	< 0.081	< 0.086	< 0.38	< 0.074	< 0.074	< 0.41	< 0.083	< 0.09	< 1.8	< 0.092	< 0.076	< 0.38
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.19	< 0.95	< 0.2	< 0.21	< 0.95	< 0.18	< 0.19	< 1	< 0.21	< 0.23	< 4.5	< 0.23	< 0.19	< 0.96
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.078	< 0.38	< 0.081	< 0.086	< 0.38	< 0.074	< 0.074	< 0.41	< 0.083	< 0.09	< 1.8	< 0.092	< 0.076	< 0.38
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	< 0.004	0.045 J	< 0.004	< 0.004	0.11	0.58	< 0.004	0.55	1.3	0.35	1.2	12	0.009 J	0.49
Fluorene	mg/kg	130,000	190,000	NS	3,800	< 0.004	< 0.019	< 0.004	< 0.004	< 0.019	0.036	< 0.004	< 0.021	0.13	0.036	< 0.09	2.7	0.004 J	0.027 J
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.019	< 0.004	< 0.004	< 0.019	< 0.004	< 0.004	< 0.021	< 0.004	< 0.005	< 0.09	< 0.005	< 0.004	< 0.019
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.19	< 0.95	< 0.2	< 0.21	< 0.95	< 0.18	< 0.19	< 1	< 0.21	< 0.23	< 4.5	< 0.23	< 0.19	< 0.96
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.039	< 0.19	< 0.041	< 0.043	< 0.19	< 0.037	< 0.037	< 0.21	< 0.042	< 0.045	< 0.9	< 0.046	< 0.038	< 0.19
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	< 0.004	0.028 J	< 0.004	< 0.004	0.074 J	0.35	< 0.004	0.21	0.24	0.08	0.59	1.8	< 0.004	0.19
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
Naphthalene	mg/kg	760	190,000	25	**25**	< 0.004	< 0.019	< 0.004	< 0.004	< 0.019	0.13	< 0.004	< 0.021	0.32	0.1	< 0.09	1.9	< 0.004	< 0.019
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	0.061	< 0.023	< 0.45	< 0.023	< 0.019	< 0.096
o-Cresol	mg/kg	160,000	190,000	NS	580	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	0.024 J	< 0.023	< 0.45	0.15	< 0.019	< 0.096
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.039	< 0.19	< 0.041	< 0.043	< 0.19	< 0.037	< 0.037	< 0.21	< 0.042	< 0.045	< 0.9	< 0.046	< 0.038	< 0.19
p-Cresol	mg/kg	16,000	190,000	NS	58	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	0.16	0.076	< 0.45	0.62	< 0.019	< 0.096
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.039	< 0.19	< 0.041	< 0.043	< 0.19	< 0.037	< 0.037	< 0.21	< 0.042	< 0.045	< 0.9	< 0.046	< 0.038	< 0.19
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	< 0.004	0.027 J	< 0.004	< 0.004	0.048 J	0.28	< 0.004	0.31	0.59	0.16	0.62	14	0.007 J	0.25
Phenol	mg/kg	16,000	18,000	7,900	200	< 0.019	< 0.095	< 0.02	< 0.021	< 0.095	< 0.018	< 0.019	< 0.1	< 0.021	0.071	< 0.45	1.1	< 0.019	< 0.096
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.078	< 0.38	< 0.081	< 0.086	< 0.38	< 0.074	< 0.074	< 0.41	< 0.083	< 0.09	< 1.8	< 0.092	< 0.076	< 0.38
Pyrene	mg/kg	96,000	190,000	NS	2,200	< 0.004	0.05 J	< 0.004	< 0.004	0.11	0.52	< 0.004	0.46	1.1	0.32	1.1	10	0.01 J	0.4
VOCs by SW8260B																			
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
2-Butanone	mg/kg	10,000	10,000	1,100	400	< 0.004	< 0.003	< 0.003	< 0.004	< 0.003	0.008 J	< 0.003	< 0.004	0.008 J	0.007 J	< 0.003	0.018	< 0.004	< 0.003

Table 8
Comprehensive Soil Sample Summary - 2015-2016
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	PADEP_2016 SO DC NRES SS 0-2FT	PADEP_2016 SO DC NRES SUBS 2-15FT	PADEP_2016 SO SHS NR	PADEP_2016 SO STGW NRES	ERM-L24-SB02 21-Oct-15 N 17 - 18 ft	ERM-L24-SB03 15-Oct-15 N 0 - 1 ft	ERM-L24-SB03 21-Oct-15 N 7 - 8 ft	ERM-L24-SB03 21-Oct-15 N 11 - 12 ft	ERM-L24-SB04 15-Oct-15 N 0 - 1 ft	ERM-L24-SB04 21-Oct-15 N 6 - 7 ft	ERM-L24-SB04 21-Oct-15 N 19 - 20 ft	ERM-L24-SB05 15-Oct-15 N 0 - 1 ft	ERM-L24-SB05 21-Oct-15 N 11 - 12 ft	ERM-L24-SB05 21-Oct-15 N 15 - 16 ft	ERM-L24-SB06 15-Oct-15 N 0 - 1 ft	ERM-L24-SB06 21-Oct-15 N 5 - 7 ft	ERM-L24-SB06 21-Oct-15 N 17 - 18 ft	ERM-L24-SB07 15-Oct-15 N 0 - 1 ft
2-Hexanone	mg/kg	2,400	2,800	6.4	26	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.002	< 0.003	< 0.003	< 0.003	< 0.002	< 0.005	< 0.003	< 0.003
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.002	< 0.003	< 0.003	< 0.003	< 0.002	< 0.005	< 0.003	< 0.003
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.017 J	< 0.006	< 0.006	< 0.008	< 0.006	0.062	0.011 J	< 0.007	0.037	0.036	< 0.005	0.098	0.045	< 0.006
Benzene	mg/kg	290	330	0.13	0.5	< 0.0004	< 0.0004	< 0.0004	< 0.0005	< 0.0004	< 0.0005	< 0.0004	< 0.0005	< 0.0005	< 0.0006	< 0.0004	< 0.0008	< 0.0005	< 0.0004
Bromodichloromethane	mg/kg	60	69	2.7	8	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Bromoform	mg/kg	2,000	2,300	3.5	8	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Carbon disulfide	mg/kg	10,000	10,000	530	620	0.018	< 0.0009	< 0.0009	< 0.001	< 0.0009	0.002 J	0.002 J	< 0.0009	0.005 J	0.005 J	< 0.0008	0.008	0.018	< 0.0008
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Chloroethane	mg/kg	10,000	10,000	26	120	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002
Chloroform	mg/kg	97	110	2	8	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Dibromochloromethane	mg/kg	82	95	2.5	8	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Ethanol	mg/kg	NS	NS	NS	NS	< 0.09	< 0.086	< 0.086	< 0.11	< 0.086	< 0.092	< 0.075	< 0.094	< 0.1	< 0.11	< 0.078	< 0.15	< 0.097	< 0.085
Ethyl acetate	mg/kg	5,600	6,400	16	62	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Ethylbenzene	mg/kg	890	1,000	46	70	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Methyl bromide	mg/kg	400	460	0.54	1	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002
Methyl chloride	mg/kg	1,200	1,400	0.38	3	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002
n-Butyl acetate	mg/kg	NS	NS	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	< 0.099	< 0.094	< 0.094	< 0.12	< 0.095	< 0.1	< 0.082	< 0.1	< 0.11	< 0.12	< 0.086	< 0.17	< 0.11	< 0.093
Styrene	mg/kg	10,000	10,000	79	24	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	< 0.004	< 0.003	< 0.003	< 0.004	< 0.003	< 0.004	< 0.003	< 0.004	< 0.004	< 0.004	< 0.003	< 0.006	< 0.004	< 0.003
Toluene	mg/kg	10,000	10,000	44	100	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Trichloroethene	mg/kg	160	180	0.17	0.5	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Vinyl chloride	mg/kg	61	280	0.027	0.2	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008
Xylenes	mg/kg	8,000	9,100	990	1,000	< 0.0009	< 0.0009	< 0.0009	< 0.001	< 0.0009	< 0.0009	< 0.0007	< 0.0009	< 0.001	< 0.001	< 0.0008	< 0.002	< 0.001	< 0.0008

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

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Marcus Hook, Pennsylvania

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Asbestos									
Asbestos, Chrysotile	%	NS	NS	NS	NS	*< 0.25*		0.25	
Asbestos, Amosite	%	NS	NS	NS	NS				
Asbestos	%	NS	NS	NS	NS		None Detected		None Detected
Ethylene glycol by SW8015									
Ethylene glycol	mg/kg	10,000	10,000	10,000	1,400	*< 6.6*	*< 5.7*	*< 6.1*	*< 6.1*
Metals									
Cyanide	mg/kg	1,900	190,000	NS	200	*< 0.23*	*< 0.21*	*< 0.21*	*< 0.21*
Metals, Total									
Aluminum	mg/kg	190,000	190,000	NS	NS	15,800	13,000	13,200	10,500
Antimony	mg/kg	**1,300**	190,000	NS	**27**	4.98	1.21 J	0.979 J	0.576 J
Arsenic	mg/kg	**61**	190,000	NS	**29**	6.31	6.38	6.13	5.59
Barium	mg/kg	190,000	190,000	NS	8,200	173	70.7	96.4	83.7
Beryllium	mg/kg	6,400	190,000	NS	320	0.965	0.749	0.803	0.644
Cadmium	mg/kg	1,600	190,000	NS	38	1.94	0.0604 J	0.104 J	*< 0.0517*
Calcium	mg/kg	NS	NS	NS	NS	6,610	1,960	2,140	1,080
Chromium	mg/kg	190,000	190,000	NS	190,000	32.7	24.4	25.8	19.5
Cobalt	mg/kg	960	190,000	NS	160	9.21	6.18	7.03	6.34
Copper	mg/kg	120,000	190,000	NS	43,000	157	163	81.4	62.5
Iron	mg/kg	190,000	190,000	NS	NS	27,500	20,200	24,600	18,400
Lead	mg/kg	**1,000**	190,000	NS	**450**	224	78.9	98.0	53.9
Magnesium	mg/kg	NS	NS	NS	NS	4,710	2,660	2,740	2,110
Manganese	mg/kg	150,000	190,000	NS	**2,000**	275	197	255	200
Mercury	mg/kg	510	190,000	NS	**10**	0.316	0.194	0.191	0.0848 J
Nickel	mg/kg	64,000	190,000	NS	650	66.9	26.9	21.9	18.6
Potassium	mg/kg	NS	NS	NS	NS	1,840	1,490	1,430	1,090
Selenium	mg/kg	16,000	190,000	NS	26	3.58	*< 0.912*	3.35	2.67
Silver	mg/kg	16,000	190,000	NS	84	0.689	*< 0.132*	0.470 J	0.345 J
Sodium	mg/kg	NS	NS	NS	NS	446	180	278	210
Thallium	mg/kg	32	190,000	NS	**14**	*< 0.964*	*< 0.824*	*< 0.885*	*< 0.902*
Vanadium	mg/kg	**220**	190,000	NS	**820**	45.0	36.1	40.0	29.5
Zinc	mg/kg	190,000	190,000	NS	12,000	613	174	172	91.5
PCBs by SW8082									
Aroclor 1016	mg/kg	46	10,000	NS	47	*< 0.0047*	*< 0.0041*	*< 0.0043*	*< 0.0043*
Aroclor 1221	mg/kg	46	10,000	0.83	0.83	*< 0.0060*	*< 0.0052*	*< 0.0055*	*< 0.0055*
Aroclor 1232	mg/kg	46	10,000	0.7	0.7	*< 0.01*	*< 0.0091*	*< 0.0096*	*< 0.0096*
Aroclor 1242	mg/kg	46	10,000	NS	20	*< 0.0043*	*< 0.0037*	*< 0.0040*	*< 0.0040*
Aroclor 1248	mg/kg	46	10,000	NS	81	0.15	*< 0.0037*	*< 0.0040*	*< 0.0040*
Aroclor 1254	mg/kg	46	10,000	NS	340	0.11	*< 0.0037*	*< 0.0040*	*< 0.0040*
Aroclor 1260	mg/kg	**46**	190,000	NS	770	*< 0.0064*	0.036	0.028	*< 0.0059*
Total PCBs	mg/kg	NS	NS	NS	NS	0.27	0.036	0.028	*< 0.0040*
SVOCs by SW8270C									
1,2,4-Trichlorobenzene	mg/kg	3,100	10,000	27	**27**	*< 0.022*	*< 0.094*	0.023 J	*< 0.02*
1,2-Dichlorobenzene	mg/kg	10,000	10,000	59	60	*< 0.022*	*< 0.094*	*< 0.02*	*< 0.02*
1,3-Dichlorobenzene	mg/kg	10,000	10,000	NS	61	*< 0.022*	*< 0.094*	*< 0.02*	*< 0.02*
1,4-Dichlorobenzene	mg/kg	200	230	10	10	*< 0.022*	*< 0.094*	*< 0.02*	*< 0.02*
2,2-Oxybis(1-chloropropane)	mg/kg	220	250	8	30	*< 0.022*	*< 0.094*	*< 0.02*	*< 0.02*
2,4,5-Trichlorophenol	mg/kg	190,000	190,000	NS	7,300	*< 0.022*	*< 0.094*	*< 0.02*	*< 0.02*
2,4,6-Trichlorophenol	mg/kg	3,200	190,000	NS	34	*< 0.022*	*< 0.094*	*< 0.02*	*< 0.02*
2,4-Dichlorophenol	mg/kg	9,600	190,000	NS	2	*< 0.022*	*< 0.094*	*< 0.02*	*< 0.02*
2,4-Dimethylphenol	mg/kg	10,000	10,000	NS	230	*< 0.022*	*< 0.094*	*< 0.02*	*< 0.02*
2,4-Dinitrophenol	mg/kg	6,400	190,000	NS	23	*< 0.39*	*< 1.7*	*< 0.36*	*< 0.36*
2,4-Dinitrotoluene	mg/kg	290	190,000	NS	1.1	*< 0.086*	*< 0.38*	*< 0.08*	*< 0.08*
2,6-Dinitrotoluene	mg/kg	61	190,000	NS	0.23	*< 0.022*	*< 0.094*	*< 0.02*	*< 0.02*
2-Chloronaphthalene	mg/kg	190,000	190,000	NS	20,000	*< 0.009*	*< 0.038*	*< 0.008*	*< 0.008*
2-Chlorophenol	mg/kg	10,000	10,000	NS	4.4	*< 0.022*	*< 0.094*	*< 0.02*	*< 0.02*

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2-Methylnaphthalene	mg/kg	13,000	190,000	1,900	1,900	9.6	0.06 J	0.062	0.025
2-Nitroaniline	mg/kg	32,000	190,000	NS	120	< 0.022	< 0.094	< 0.02	< 0.02
2-Nitrophenol	mg/kg	26,000	190,000	NS	93	< 0.022	< 0.094	< 0.02	< 0.02
3,3'-Dichlorobenzidine	mg/kg	200	190,000	NS	42	< 0.13	< 0.56	< 0.12	< 0.12
3-Nitroaniline	mg/kg	NS	NS	NS	NS	< 0.086	< 0.38	< 0.08	< 0.08
4-Bromophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.022	< 0.094	< 0.02	< 0.02
4-Chloro-3-methylphenol	mg/kg	190,000	190,000	NS	2,500	< 0.022	< 0.094	< 0.02	< 0.02
4-Chlorophenyl phenyl ether	mg/kg	NS	NS	NS	NS	< 0.022	< 0.094	< 0.02	< 0.02
4-Nitrophenol	mg/kg	26,000	190,000	NS	6	< 0.22	< 0.94	< 0.2	< 0.2
Acenaphthene	mg/kg	190,000	190,000	NS	4,700	18	0.025 J	0.023	0.03
Acenaphthylene	mg/kg	190,000	190,000	NS	8,000	0.75 J	0.026 J	0.025	0.012 J
Anthracene	mg/kg	190,000	190,000	NS	350	42	0.063 J	0.07	0.021
Benzo(a)anthracene	mg/kg	**130**	190,000	NS	430	35	0.24	0.1	0.047
Benzo(a)pyrene	mg/kg	**12**	190,000	NS	**46**	27	0.23	0.084	0.034
Benzo(b)fluoranthene	mg/kg	**76**	190,000	NS	170	32	0.34	0.12	0.051
Benzo(g,h,i)perylene	mg/kg	190,000	190,000	NS	180	17	0.16	0.085	0.023
Benzo(k)fluoranthene	mg/kg	**76**	190,000	NS	610	13	0.091 J	0.048	0.02 J
Benzyl butyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.086	< 0.38	< 0.08	< 0.08
Bis(2-chloroethoxy)methane	mg/kg	9,600	10,000	NS	35	< 0.022	< 0.094	< 0.02	< 0.02
Bis(2-ethylhexyl)phthalate	mg/kg	6,500	10,000	NS	130	< 0.086	< 0.38	< 0.08	< 0.08
Carbazole	mg/kg	4,600	190,000	NS	110	9.4	< 0.094	< 0.02	< 0.02
Chrysene	mg/kg	760	190,000	NS	230	32	0.3	0.17	0.074
Dibenzo(a,h)anthracene	mg/kg	22	190,000	NS	270	3.7	0.058 J	0.024	0.012 J
Dibenzofuran	mg/kg	3,200	190,000	NS	310	14	< 0.094	0.038 J	< 0.02
Dibutyl phthalate	mg/kg	10,000	10,000	NS	4,900	< 0.086	< 0.38	< 0.08	< 0.08
Dichloroethyl ether	mg/kg	6.7	7.7	0.14	0.076	< 0.022	< 0.094	< 0.02	< 0.02
Diethyl phthalate	mg/kg	10,000	10,000	NS	9,300	< 0.086	< 0.38	< 0.08	< 0.08
Dimethyl phthalate	mg/kg	NS	NS	NS	NS	< 0.086	< 0.38	< 0.08	< 0.08
Dinitro-o-cresol	mg/kg	260	190,000	NS	0.93	< 0.22	< 0.94	< 0.2	< 0.2
Di-n-octyl phthalate	mg/kg	10,000	10,000	NS	10,000	< 0.086	< 0.38	< 0.08	< 0.08
Fluoranthene	mg/kg	130,000	190,000	NS	3,200	87	0.33	0.22	0.11
Fluorene	mg/kg	130,000	190,000	NS	3,800	22	0.046 J	0.063	0.02 J
Hexachlorobenzene	mg/kg	57	190,000	NS	0.96	< 0.004	< 0.019	< 0.004	< 0.004
Hexachlorobutadiene	mg/kg	1,200	10,000	NS	52	< 0.022	< 0.094	< 0.02	< 0.02
Hexachlorocyclopentadiene	mg/kg	10,000	10,000	NS	91	< 0.22	< 0.94	< 0.2	< 0.2
Hexachloroethane	mg/kg	220	260	0.56	0.56	< 0.043	< 0.19	< 0.04	< 0.04
Indeno(1,2,3-cd)pyrene	mg/kg	76	190,000	NS	22,000	15	0.14	0.058	0.022
Isophorone	mg/kg	10,000	10,000	NS	10	< 0.022	< 0.094	< 0.02	< 0.02
Naphthalene	mg/kg	760	190,000	25	**25**	10	0.056 J	0.056	0.025
Nitrobenzene	mg/kg	6,400	10,000	10	23	< 0.022	< 0.094	< 0.02	< 0.02
n-Nitrosodi-n-propylamine	mg/kg	13	10,000	NS	0.049	< 0.022	< 0.094	< 0.02	< 0.02
n-Nitrosodiphenylamine	mg/kg	19,000	190,000	NS	110	< 0.022	< 0.094	< 0.02	< 0.02
o-Cresol	mg/kg	160,000	190,000	NS	580	0.2	< 0.094	< 0.02	< 0.02
p-Chloroaniline	mg/kg	460	190,000	NS	2.1	< 0.043	< 0.19	< 0.04	< 0.04
p-Cresol	mg/kg	16,000	190,000	NS	58	0.47	< 0.094	0.025 J	< 0.02
Pentachlorophenol	mg/kg	230	190,000	NS	5	< 0.043	< 0.19	< 0.04	< 0.04
Phenanthrene	mg/kg	190,000	190,000	NS	10,000	120	0.2	0.22	0.066
Phenol	mg/kg	16,000	18,000	7,900	200	57	< 0.094	< 0.02	< 0.02
p-Nitroaniline	mg/kg	4,600	190,000	NS	17	< 0.086	< 0.38	< 0.08	< 0.08
Pyrene	mg/kg	96,000	190,000	NS	2,200	77	0.3	0.22	0.11
VOCs by SW8260B									
1,1,1-Trichloroethane	mg/kg	10,000	10,000	7.4	20	< 0.001	< 0.0008	< 0.0009	< 0.0009
1,1,2,2-Tetrachloroethane	mg/kg	38	44	0.13	0.43	< 0.001	< 0.0008	< 0.0009	< 0.0009
1,1,2-Trichloroethane	mg/kg	16	18	0.15	0.5	< 0.001	< 0.0008	< 0.0009	< 0.0009
1,1-Dichloroethane	mg/kg	1,400	1,600	3.9	16	< 0.001	< 0.0008	< 0.0009	< 0.0009
1,1-Dichloroethene	mg/kg	10,000	10,000	0.19	0.7	< 0.001	< 0.0008	< 0.0009	< 0.0009
1,2-Dichloroethane	mg/kg	86	98	0.1	0.5	< 0.001	< 0.0008	< 0.0009	< 0.0009
1,2-Dichloropropane	mg/kg	220	260	0.11	0.5	< 0.001	< 0.0008	< 0.0009	< 0.0009
2-Butanone	mg/kg	10,000	10,000	1,100	400	0.007 J	< 0.003	< 0.004	< 0.003

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2-Hexanone	mg/kg	2,400	2,800	6.4	26	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*
4-Methyl-2-pentanone	mg/kg	10,000	10,000	210	930	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*
Acetone	mg/kg	10,000	10,000	4,700	10,000	0.044	0.014 J	0.021	0.014 J
Benzene	mg/kg	290	330	0.13	0.5	*< 0.0005*	*< 0.0004*	*< 0.0004*	*< 0.0004*
Bromodichloromethane	mg/kg	60	69	2.7	8	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Bromoform	mg/kg	2,000	2,300	3.5	8	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Carbon disulfide	mg/kg	10,000	10,000	530	620	0.009	*< 0.0008*	*< 0.0009*	*< 0.0009*
Carbon tetrachloride	mg/kg	370	430	0.26	0.5	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Chlorobenzene	mg/kg	4,000	4,600	6.1	10	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Chloroethane	mg/kg	10,000	10,000	26	120	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*
Chloroform	mg/kg	97	110	2	8	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
cis-1,2-Dichloroethene	mg/kg	6,400	10,000	NS	7	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
cis-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Dibromochloromethane	mg/kg	82	95	2.5	8	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Ethanol	mg/kg	NS	NS	NS	NS	*< 0.099*	*< 0.084*	*< 0.089*	*< 0.086*
Ethyl acetate	mg/kg	5,600	6,400	16	62	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Ethylbenzene	mg/kg	890	1,000	46	70	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Methyl bromide	mg/kg	400	460	0.54	1	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*
Methyl chloride	mg/kg	1,200	1,400	0.38	3	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*
Methylene chloride	mg/kg	10,000	10,000	1.5	0.5	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*
n-Butyl acetate	mg/kg	NS	NS	NS	NS	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*
n-Butyl alcohol	mg/kg	10,000	10,000	NS	1,200	*< 0.11*	*< 0.093*	*< 0.098*	*< 0.095*
Styrene	mg/kg	10,000	10,000	79	24	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Tetrachloroethene	mg/kg	3,200	3,600	0.43	0.5	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Tetrahydrofuran	mg/kg	1,200	1,400	2.8	13	*< 0.004*	*< 0.003*	*< 0.004*	*< 0.003*
Toluene	mg/kg	10,000	10,000	44	100	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
trans-1,2-Dichloroethene	mg/kg	4,800	5,500	2.3	10	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
trans-1,3-Dichloropropene	mg/kg	NS	NS	NS	NS	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Trichloroethene	mg/kg	160	180	0.17	0.5	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Vinyl chloride	mg/kg	61	280	0.027	0.2	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*
Xylenes	mg/kg	8,000	9,100	990	1,000	*< 0.001*	*< 0.0008*	*< 0.0009*	*< 0.0009*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
mg/kg = milligrams per kilogram
% = percent
ft = feet

Qualifiers - Organic:
E = Result exceeds the instrument calibration range.
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
P = Concentration difference between the primary and confirmation column >40%. The lower result is reported. (Lancaster)

Qualifiers - Inorganic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

Analyis performed by Lancaster, EMSL Analytical.

PADEP_2016 SO DC NRES SS 0-2FT = PA Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO DC NRES SUBS 2-15FT = PA MSC, Non-Residential Direct Contact 2-15 ft, revised August 2016.
PADEP_2016 SO SHS NR = PA Soil Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016. The Svsoil is applicable only to samples in the unsaturated zone.
PADEP_2016 SO STGW NRES = PA MSCs, Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L01-SB06 17-Apr-17 N 0 - 2 ft	ERM-L01-SB07 17-Apr-17 N 0 - 2 ft	ERM-L01-SB08 17-Apr-17 N 0 - 2 ft	ERM-L01-SB09 17-Apr-17 N 0 - 2 ft	ERM-L04-SB03 19-Apr-17 N 0 - 2 ft	ERM-L04-SB04 19-Apr-17 N 0 - 2 ft
Metals, Dissolved, Method SW6010B, Total, mg/kg									
Antimony	mg/kg	1,300	**27**						
Arsenic	mg/kg	61	29						
Lead	mg/kg	**1,000**	**450**						
Vanadium	mg/kg	**220**	820					**298**	**710**
PCBs by SW8082, Method SW8082, mg/kg									
Aroclor 1260	mg/kg	**46**	**770**						
SVOCs by SW8270C, Method SW8270C, mg/kg									
Benzo(a)pyrene	mg/kg	**12**	46	1.3	1.8	1.1	0.7		

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L04-SB05 19-Apr-17 N 0 - 2 ft	ERM-L04-SB06 19-Apr-17 N 0 - 2 ft	ERM-L04-SB07 24-Jul-17 N 0 - 2 ft	ERM-L04-SB08 24-Jul-17 N 0 - 2 ft	ERM-L04-SB09 24-Jul-17 N 0 - 2 ft	ERM-L04-SB10 24-Jul-17 N 0 - 2 ft
Metals, Dissolved, Method SW6010B, Total, mg/kg									
Antimony	mg/kg	1,300	**27**						
Arsenic	mg/kg	61	29						
Lead	mg/kg	**1,000**	**450**						
Vanadium	mg/kg	**220**	820	**237**	**488**	**414**	**495**	97.7	215
PCBs by SW8082, Method SW8082, mg/kg									
Aroclor 1260	mg/kg	**46**	**770**						
SVOCs by SW8270C, Method SW8270C, mg/kg									
Benzo(a)pyrene	mg/kg	**12**	46						

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L04-SB11 24-Jul-17 N 0 - 2 ft	ERM-L04-SB12 24-Jul-17 N 0 - 2 ft	ERM-L08-SB03 19-Apr-17 N 0 - 2 ft	ERM-L09-SB05 19-Apr-17 N 0 - 2 ft	ERM-L10-SB05 19-Apr-17 N 0 - 2 ft	ERM-L11-SB05 19-Apr-17 N 0 - 2 ft
Metals, Dissolved, Method SW6010B, Total, mg/kg									
Antimony	mg/kg	1,300	**27**						
Arsenic	mg/kg	61	29						15.7
Lead	mg/kg	**1,000**	**450**						9.86
Vanadium	mg/kg	**220**	820	**581**	**360**	42.2	39.8	**255**	17.2
PCBs by SW8082, Method SW8082, mg/kg									
Aroclor 1260	mg/kg	**46**	**770**						
SVOCs by SW8270C, Method SW8270C, mg/kg									
Benzo(a)pyrene	mg/kg	**12**	46						

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L15-SB05 19-Apr-17 N 0 - 2 ft	ERM-L15-SB06 19-Apr-17 N 0 - 2 ft	ERM-L15-SB07 19-Apr-17 N 0 - 2 ft	ERM-L15-SB08 19-Apr-17 N 0 - 2 ft	ERM-L15-SB09 21-Jul-17 N 0 - 2 ft	ERM-L15-SB10 21-Jul-17 N 0 - 2 ft
Metals, Dissolved, Method SW6010B, Total, mg/kg									
Antimony	mg/kg	1,300	**27**	**420**	13.6	23.4	10.4		
Arsenic	mg/kg	61	29						
Lead	mg/kg	**1,000**	**450**	**23,800**	**1,070**	**908**	**962**	**1,250**	**2,100**
Vanadium	mg/kg	**220**	820						
PCBs by SW8082, Method SW8082, mg/kg									
Aroclor 1260	mg/kg	**46**	**770**						
SVOCs by SW8270C, Method SW8270C, mg/kg									
Benzo(a)pyrene	mg/kg	**12**	46						

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L15-SB11 21-Jul-17 N 0 - 2 ft	ERM-L15-SB12 21-Jul-17 N 0 - 2 ft	ERM-L15-SB13 05-Oct-17 N -	ERM-L15-SB15 05-Oct-17 N -	ERM-L15-SB16 05-Oct-17 N -	ERM-L15-SB17 05-Oct-17 N -
Metals, Dissolved, Method SW6010B, Total, mg/kg									
Antimony	mg/kg	1,300	**27**						
Arsenic	mg/kg	61	29						
Lead	mg/kg	**1,000**	**450**	**6,050**	**47,500**	269	169	228	**1,170**
Vanadium	mg/kg	**220**	820						
PCBs by SW8082, Method SW8082, mg/kg									
Aroclor 1260	mg/kg	**46**	**770**						
SVOCs by SW8270C, Method SW8270C, mg/kg									
Benzo(a)pyrene	mg/kg	**12**	46						

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L15-SB18 05-Oct-17 N -	ERM-L17-SB07 18-Apr-17 N 0 - 2 ft	ERM-L17-SB08 19-Apr-17 N 0 - 2 ft	ERM-L17-SB09 19-Apr-17 N 0 - 2 ft	ERM-L17-SB10 18-Apr-17 N 0 - 2 ft	ERM-L17-SB11 18-Apr-17 N 0 - 2 ft
Metals, Dissolved, Method SW6010B, Total, mg/kg									
Antimony	mg/kg	1,300	**27**						
Arsenic	mg/kg	61	29						
Lead	mg/kg	**1,000**	**450**	**2,140**	239	337	226	**606**	
Vanadium	mg/kg	**220**	820						
PCBs by SW8082, Method SW8082, mg/kg									
Aroclor 1260	mg/kg	**46**	**770**		8.7	**72**	**460**	**1,600**	14
SVOCs by SW8270C, Method SW8270C, mg/kg									
Benzo(a)pyrene	mg/kg	**12**	46						

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L17-SB11B 21-Jul-17 N 0 - 2 ft	ERM-L17-SB12 18-Apr-17 N 0 - 2 ft	ERM-L17-SB12B 21-Jul-17 N 0 - 2 ft	ERM-L17-SB13 18-Apr-17 N 0 - 2 ft	ERM-L17-SB13B 21-Jul-17 N 0 - 2 ft	ERM-L17-SB14 18-Apr-17 N 0 - 2 ft
Metals, Dissolved, Method SW6010B, Total, mg/kg									
Antimony	mg/kg	1,300	**27**						
Arsenic	mg/kg	61	29						
Lead	mg/kg	**1,000**	**450**						
Vanadium	mg/kg	**220**	820						
PCBs by SW8082, Method SW8082, mg/kg									
Aroclor 1260	mg/kg	**46**	**770**	10	46	6.3	0.94	**17,000**	5.2
SVOCs by SW8270C, Method SW8270C, mg/kg									
Benzo(a)pyrene	mg/kg	**12**	46						

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L17-SB16B 21-Jul-17 N 0 - 2 ft	ERM-L21-SB07 18-Apr-17 N 0 - 2 ft	ERM-L21-SB08 18-Apr-17 N 0 - 2 ft	ERM-L21-SB09 18-Apr-17 N 0 - 2 ft	ERM-L21-SB10 18-Apr-17 N 0 - 2 ft	ERM-L21-SB11 21-Jul-17 N 0 - 2 ft
Metals, Dissolved, Method SW6010B, Total, mg/kg									
Antimony	mg/kg	1,300	**27**						
Arsenic	mg/kg	61	29						
Lead	mg/kg	**1,000**	**450**						
Vanadium	mg/kg	**220**	820						
PCBs by SW8082, Method SW8082, mg/kg									
Aroclor 1260	mg/kg	**46**	**770**	**12,000 D2**	32	**450**	12	5.9	**450**
SVOCs by SW8270C, Method SW8270C, mg/kg									
Benzo(a)pyrene	mg/kg	**12**	46						

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L21-SB12 21-Jul-17 N 0 - 2 ft	ERM-L22-SB07 17-Apr-17 N 0 - 2 ft	ERM-L22-SB08 17-Apr-17 N 0 - 2 ft	ERM-L22-SB09 17-Apr-17 N 0 - 2 ft	ERM-L22-SB10 17-Apr-17 N 0 - 2 ft	ERM-L22-SB11 17-Apr-17 N 0 - 2 ft
Metals, Dissolved, Method SW6010B, Total, mg/kg									
Antimony	mg/kg	1,300	**27**						
Arsenic	mg/kg	61	29						
Lead	mg/kg	**1,000**	**450**						
Vanadium	mg/kg	**220**	820						
PCBs by SW8082, Method SW8082, mg/kg									
Aroclor 1260	mg/kg	**46**	**770**	0.05 D1					
SVOCs by SW8270C, Method SW8270C, mg/kg									
Benzo(a)pyrene	mg/kg	**12**	46		0.67	**15**	1.2	0.11	0.8

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L22-SB12 17-Apr-17 N 0 - 2 ft	ERM-L22-SB13 17-Apr-17 N 0 - 2 ft	ERM-L22-SB14 17-Apr-17 N 0 - 2 ft	ERM-L22-SB15 21-Jul-17 N 0 - 2 ft	ERM-L22-SB16 21-Jul-17 N 0 - 2 ft	ERM-L22-SB17 21-Jul-17 N 0 - 2 ft
Metals, Dissolved, Method SW6010B, Total, mg/kg									
Antimony	mg/kg	1,300	**27**						
Arsenic	mg/kg	61	29						
Lead	mg/kg	**1,000**	**450**						
Vanadium	mg/kg	**220**	820						
PCBs by SW8082, Method SW8082, mg/kg									
Aroclor 1260	mg/kg	**46**	**770**						
SVOCs by SW8270C, Method SW8270C, mg/kg									
Benzo(a)pyrene	mg/kg	**12**	46	**20**	0.26	0.083	**14**	0.19	3

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 9
Additional Surface Soil Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Direct Contact 0-2 PADEP_2016 SO DC NRES SS 0-2FT	Soil to Groundwater PADEP_2016 SO STGW NRES	ERM-L24-SB09 18-Apr-17 N 0 - 2 ft	ERM-L24-SB10 18-Apr-17 N 0 - 2 ft	ERM-L24-SB11 18-Apr-17 N 0 - 2 ft	ERM-L24-SB12 18-Apr-17 N 0 - 2 ft
Metals, Dissolved, Method SW6010B, Total, mg/kg							
Antimony	mg/kg	1,300	**27**				
Arsenic	mg/kg	61	29				
Lead	mg/kg	**1,000**	**450**	156	78.3	69.8	182
Vanadium	mg/kg	**220**	820				
PCBs by SW8082, Method SW8082, mg/kg							
Aroclor 1260	mg/kg	**46**	**770**				
SVOCs by SW8270C, Method SW8270C, mg/kg							
Benzo(a)pyrene	mg/kg	**12**	46				

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/kg = milligrams per kilogram
ft = feet

Qualifiers - Organic:
D1 = Sample required dilution due to matrix
D2 = Sample required dilution due to high concentration of target analyte
All analyses performed by Lancaster.

PADEP_2016 SO DC NRES SS 0-2FT = Pennsylvania Medium Specific Concentration (MSC), Non-Residential Direct Contact 0-2 ft, revised August 2016.
PADEP_2016 SO STGW NRES = Pennsylvania Medium-Specific Concentrations (MSCs), Non-Residential Soil to Groundwater, higher of 100xGW MSC and Generic Value, revised August 2016.

Table 10
Basement Water Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L02-01B 30-Mar-17	ERM-L06-01B 30-Mar-17
Inorganics Field Filtered, mg/L				
Aluminum	NS	NS	*< 0.0868*	*< 0.0868*
Antimony	0.006	NS	*< 0.0077*	*< 0.0077*
Arsenic	0.01	NS	*< 0.0097*	*< 0.0097*
Barium	2	NS	0.0190	0.0763
Beryllium	0.004	NS	*< 0.00067*	*< 0.00067*
Cadmium	0.005	NS	0.00059 J	*< 0.00049*
Calcium	NS	NS	74.3	73.9
Chromium	0.1	NS	*< 0.0018*	*< 0.0018*
Cobalt	0.035	NS	*< 0.0019*	*< 0.0019*
Copper	1	NS	0.0059 J	0.0044 J
Iron	NS	NS	*< 0.0747*	*< 0.0747*
Lead	0.005	NS	*< 0.0062*	*< 0.0062*
Magnesium	NS	NS	19.8	8.29
Manganese	0.3	NS	0.0066	0.0023 J
Nickel	0.1	NS	*< 0.0028*	*< 0.0028*
Potassium	NS	NS	7.69	6.88
Selenium	0.05	NS	*< 0.0097*	*< 0.0097*
Silver	0.1	NS	*< 0.0019*	*< 0.0019*
Sodium	NS	NS	27.6	43.6
Thallium	0.002	NS	*< 0.0094*	*< 0.0094*
Vanadium	0.0082	NS	*< 0.0016*	*< 0.0016*
Zinc	2	NS	0.160	0.0487
Mecury Field Filtered, mg/L				
Mercury	0.002	NS	*< 0.000050*	*< 0.000050*
Ethylene Glycol, mg/L				
Ethylene glycol	14	1,000,000	*< 5.0*	*< 5.0*
PCBs, mg/L				
Aroclor 1016	0.0017	NS	*< 0.000081*	*< 0.000081*
Aroclor 1221	0.0017	0.053	*< 0.000081*	*< 0.000081*
Aroclor 1232	0.0017	0.055	*< 0.00016*	*< 0.00016*
Aroclor 1242	0.0017	NS	*< 0.000081*	*< 0.000081*
Aroclor 1248	0.0017	NS	*< 0.000081*	*< 0.000081*
Aroclor 1254	0.0017	NS	*< 0.000081*	*< 0.000081*
Aroclor 1260	0.0017	NS	*< 0.00012*	*< 0.00012*
Volatile Organic Compounds, mg/L				
1,1,1-Trichloroethane	0.2	160	*< 0.0005*	*< 0.0005*
1,1,2,2-Tetrachloroethane	0.0043	0.82	*< 0.0005*	*< 0.0005*
1,1,2-Trichloroethane	0.005	0.14	*< 0.0005*	*< 0.0005*
1,1-Dichloroethane	0.16	1.6	*< 0.0005*	*< 0.0005*
1,1-Dichloroethene	0.007	3.8	*< 0.0005*	*< 0.0005*
1,2-Dichloroethane	0.005	0.51	*< 0.0005*	*< 0.0005*
1,2-Dichloropropane	0.005	0.56	*< 0.0005*	*< 0.0005*
2-Butanone	4	49,000	*< 0.003*	*< 0.003*
2-Hexanone	0.26	200	*< 0.003*	*< 0.003*
4-Methyl-2-pentanone	9.3	13,000	*< 0.003*	*< 0.003*
Acetone	110	470,000	*< 0.006*	*< 0.006*
Benzene	0.005	0.35	*< 0.0005*	*< 0.0005*
Bromodichloromethane	0.08	0.2	*< 0.0005*	*< 0.0005*
Bromoform	0.08	30	*< 0.0005*	*< 0.0005*
Carbon disulfide	6.2	25	*< 0.001*	*< 0.001*
Carbon tetrachloride	0.005	0.091	*< 0.0005*	*< 0.0005*
Chlorobenzene	0.1	9.6	*< 0.0005*	*< 0.0005*
Chloroethane	1.2	440	*< 0.0005*	*< 0.0005*
Chloroform	0.08	0.18	*< 0.0005*	*< 0.0005*
cis-1,2-Dichloroethene	0.07	NS	*< 0.0005*	*< 0.0005*
cis-1,3-Dichloropropene	NS	NS	*< 0.0005*	*< 0.0005*
Dibromochloromethane	0.08	0.67	*< 0.0005*	*< 0.0005*
Ethanol	NS	NS	*< 0.05*	*< 0.05*
Ethyl acetate	0.62	290	*< 0.001*	*< 0.001*

Table 10
Basement Water Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L02-01B 30-Mar-17	ERM-L06-01B 30-Mar-17
Ethylbenzene	0.7	0.86	< 0.0005	< 0.0005
Methyl bromide	0.01	0.33	< 0.0005	< 0.0005
Methyl chloride	0.03	0.81	< 0.0005	< 0.0005
Methylene chloride	0.005	95	< 0.002	< 0.002
n-Butyl acetate	NS	NS	< 0.002	< 0.002
n-Butyl alcohol	12	NS	< 0.1	< 0.1
Styrene	0.1	220	< 0.001	< 0.001
Tetrachloroethene	0.005	1.3	< 0.0005	< 0.0005
Tetrahydrofuran	0.13	0.13	< 0.004	< 0.004
Toluene	1	430	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	0.1	7.6	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	NS	NS	< 0.0005	< 0.0005
Trichloroethene	0.005	0.11	< 0.0005	< 0.0005
Vinyl chloride	0.002	0.052	< 0.0005	< 0.0005
Xylenes	10	12	< 0.0005	< 0.0005
Semi Volatile Organic Compounds, mg/L				
1,2,4-Trichlorobenzene	0.07	1	< 0.0005	< 0.0005
1,2-Dichlorobenzene	0.6	69	< 0.0005	< 0.0005
1,3-Dichlorobenzene	0.6	NS	< 0.0005	< 0.0005
1,4-Dichlorobenzene	0.075	0.68	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	0.3	25	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	12	NS	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	0.12	NS	< 0.0005	< 0.0005
2,4-Dichlorophenol	0.02	NS	< 0.0005	< 0.0005
2,4-Dimethylphenol	2.3	NS	< 0.0005	< 0.0005
2,4-Dinitrophenol	0.23	NS	< 0.01	< 0.01
2,4-Dinitrotoluene	0.011	NS	< 0.001	< 0.001
2,6-Dinitrotoluene	0.002	NS	< 0.0005	< 0.0005
2-Chloronaphthalene	9.3	NS	< 0.0004	< 0.0004
2-Chlorophenol	0.04	NS	< 0.0005	< 0.0005
2-Methylnaphthalene	0.47	4.8	< 0.0001	< 0.0001
2-Nitroaniline	1.2	NS	< 0.0005	< 0.0005
2-Nitrophenol	0.93	NS	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	0.0076	NS	< 0.002	< 0.002
3-Nitroaniline	NS	NS	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	NS	NS	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	12	NS	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	NS	NS	< 0.0005	< 0.0005
4-Nitrophenol	0.06	NS	< 0.01	< 0.01
Acenaphthene	3.8	NS	< 0.0001	< 0.0001
Acenaphthylene	7	NS	< 0.0001	< 0.0001
Anthracene	0.066	NS	< 0.0001	< 0.0001
Benzo(a)anthracene	0.0049	NS	< 0.0001	< 0.0001
Benzo(a)pyrene	0.0002	NS	< 0.0001	< 0.0001
Benzo(b)fluoranthene	0.0012	NS	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	0.00026	NS	< 0.0001	< 0.0001
Benzo(k)fluoranthene	0.00055	NS	< 0.0001	< 0.0001
Benzyl butyl phthalate	1.8	NS	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	0.35	NS	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	0.006	NS	< 0.002	< 0.002
Carbazole	0.17	NS	< 0.0005	< 0.0005
Chrysene	0.0019	NS	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	0.0006	NS	< 0.0001	< 0.0001
Dibenzofuran	0.12	NS	< 0.0005	< 0.0005
Dibutyl phthalate	12	NS	< 0.002	< 0.002
Dichloroethyl ether	0.00076	3.6	< 0.0005	< 0.0005
Diethyl phthalate	93	NS	< 0.002	< 0.002
Dimethyl phthalate	NS	NS	< 0.002	< 0.002
Dinitro-o-cresol	0.0093	NS	< 0.005	< 0.005
Di-n-octyl phthalate	1.2	NS	< 0.002	< 0.002
Fluoranthene	0.26	NS	< 0.0001	< 0.0001
Fluorene	1.9	NS	< 0.0001	< 0.0001

Table 10
Basement Water Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L02-01B 30-Mar-17	ERM-L06-01B 30-Mar-17
Hexachlorobenzene	0.001	NS	*< 0.0001*	*< 0.0001*
Hexachlorobutadiene	0.044	NS	*< 0.0005*	*< 0.0005*
Hexachlorocyclopentadiene	0.05	NS	*< 0.005*	*< 0.005*
Hexachloroethane	0.001	0.48	*< 0.001*	*< 0.001*
Indeno(1,2,3-cd)pyrene	0.0028	NS	*< 0.0001*	*< 0.0001*
Isophorone	0.1	NS	*< 0.0005*	*< 0.0005*
Naphthalene	0.1	1.3	*< 0.0001*	*< 0.0001*
Nitrobenzene	0.23	21	*< 0.0005*	*< 0.0005*
n-Nitrosodi-n-propylamine	0.00049	NS	*< 0.0005*	*< 0.0005*
n-Nitrosodiphenylamine	0.69	NS	*< 0.0005*	*< 0.0005*
o-Cresol	5.8	NS	*< 0.0005*	*< 0.0005*
p-Chloroaniline	0.017	NS	*< 0.002*	*< 0.002*
p-Cresol	0.58	NS	*< 0.0005*	*< 0.0005*
Pentachlorophenol	0.001	NS	*< 0.001*	*< 0.001*
Phenanthrene	1.1	NS	*< 0.0001*	*< 0.0001*
Phenol	2	84,000	*< 0.0005*	*< 0.0005*
p-Nitroaniline	0.17	NS	*< 0.0005*	*< 0.0005*
Pyrene	0.13	NS	*< 0.0001*	*< 0.0001*
Cyanide, mg/L				
Cyanide	0.2	NS	*< 0.0050*	*< 0.0050*

Table 10
Basement Water Sample Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/L = milligrams per liter
Shaded cell in the screening column indicates that at least one sample had a reported exceedance of that value
Shaded cell in a sample column indicates that there was an exceedance of a screening value.

Qualifiers - Organic:
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)

JP = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
All analyses performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW SHS NR are the Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.

PADEP_2016 GW NRES standards are the Pennsylvania Act 2 Medium Specific Concentrations (MSCs), non-residential ground water, TDS ≤ 2500, revised August 2016.

Analysis	**Analytical Method**
Inorganics Field Filtered	Method SW6010B, Dissolved, mg/L
Mercury Field Filtered	Method SW7470A, Dissolved, mg/L
Ethylene Glycol	Method SW8015B, mg/L
PCBs	Method SW8082, mg/L
Volatile Organic Compounds	Method SW8260B, mg/L
Semi Volatile Organic Compounds	Method SW8270C, mg/L
Cyanide	Method SW9012A, mg/L

Table 11
Sewer Manhole Water Sampling Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L06-MH-CW11 21-Apr-17	ERM-L06-MH-M6 20-Apr-17	ERM-L11-MH-S15 20-Apr-17	ERM-L13-MH-CW21 20-Apr-17
Inorganics Field Filtered, mg/L						
Aluminum	NS	NS	*< 0.0868*	*< 0.0868*	*< 0.0868*	0.102 J
Antimony	0.006	NS	*< 0.0077*	*< 0.0077*	*< 0.0077*	*< 0.0077*
Arsenic	0.01	NS	*< 0.0097*	*< 0.0097*	*< 0.0097*	*< 0.0097*
Barium	2	NS	0.0075	0.0254	0.0614	0.0421
Beryllium	0.004	NS	*< 0.00067*	*< 0.00067*	*< 0.00067*	*< 0.00067*
Cadmium	0.005	NS	0.00065 J	0.0029 J	0.00089 J	0.00064 J
Calcium	NS	NS	6.73	50.0	79.5	99.0
Chromium	0.1	NS	*< 0.0018*	*< 0.0018*	*< 0.0018*	*< 0.0018*
Cobalt	0.035	NS	*< 0.0019*	*< 0.0019*	0.0021 J	0.0023 J
Copper	1	NS	*< 0.0041*	*< 0.0041*	*< 0.0041*	0.0095 J
Iron	NS	NS	*< 0.0747*	*< 0.0747*	31.4	2.90
Lead	0.005	NS	*< 0.0062*	*< 0.0062*	**0.0110 J**	*< 0.0062*
Magnesium	NS	NS	0.744	13.0	24.3	16.7
Manganese	0.3	NS	0.0047 J	0.0375	**1.21**	**0.445**
Nickel	0.1	NS	*< 0.0028*	*< 0.0028*	*< 0.0028*	0.0095 J
Potassium	NS	NS	0.594	1.37	7.71	6.74
Selenium	0.05	NS	*< 0.0097*	*< 0.0097*	*< 0.0097*	*< 0.0097*
Silver	0.1	NS	*< 0.0019*	*< 0.0019*	*< 0.0019*	*< 0.0019*
Sodium	NS	NS	3.21	31.6	134	92.6
Thallium	0.002	NS	*< 0.0094*	*< 0.0094*	*< 0.0094*	*< 0.0094*
Vanadium	0.0082	NS	0.0017 J	*< 0.0016*	0.0025 J	0.0020 J
Zinc	2	NS	0.0828	1.44	0.0122 J	0.105
Mercury Field Filtered, mg/L						
Mercury	0.002	NS	*< 0.000050*	*< 0.000050*	*< 0.000050*	*< 0.000050*
Ethylene Glycol, mg/L						
Ethylene glycol	14	1,000,000	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
PCBs, mg/L						
Aroclor 1016	0.0017	NS	*< 0.000083*	*< 0.000081*	*< 0.000080*	*< 0.000080*
Aroclor 1221	0.0017	0.053	*< 0.000083*	*< 0.000081*	*< 0.000080*	*< 0.000080*
Aroclor 1232	0.0017	0.055	*< 0.00017*	*< 0.00016*	*< 0.00016*	*< 0.00016*
Aroclor 1242	0.0017	NS	*< 0.000083*	*< 0.000081*	*< 0.000080*	*< 0.000080*
Aroclor 1248	0.0017	NS	*< 0.000083*	*< 0.000081*	*< 0.000080*	*< 0.000080*
Aroclor 1254	0.0017	NS	*< 0.000083*	0.00027 J	*< 0.000080*	*< 0.000080*
Aroclor 1260	0.0017	NS	*< 0.00012*	0.00023 JP	*< 0.00012*	0.00078
Volatile Organic Compounds, mg/L						
1,1,1-Trichloroethane	0.2	160	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,1,2,2-Tetrachloroethane	0.0043	0.82	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,1,2-Trichloroethane	0.005	0.14	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,1-Dichloroethane	0.16	1.6	*< 0.0005*	*< 0.0005*	0.001	*< 0.0005*
1,1-Dichloroethene	0.007	3.8	*< 0.0005*	*< 0.0005*	0.002	0.002
1,2-Dichloroethane	0.005	0.51	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,2-Dichloropropane	0.005	0.56	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
2-Butanone	4	49,000	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*
2-Hexanone	0.26	200	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*
4-Methyl-2-pentanone	9.3	13,000	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*
Acetone	110	470,000	*< 0.006*	*< 0.006*	0.008 J	*< 0.006*
Benzene	0.005	0.35	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Bromodichloromethane	0.08	0.2	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Bromoform	0.08	30	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Carbon disulfide	6.2	25	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*
Carbon tetrachloride	0.005	0.091	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Chlorobenzene	0.1	9.6	*< 0.0005*	*< 0.0005*	0.002	*< 0.0005*
Chloroethane	1.2	440	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Chloroform	0.08	0.18	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
cis-1,2-Dichloroethene	0.07	NS	*< 0.0005*	*< 0.0005*	0.002	0.002
cis-1,3-Dichloropropene	NS	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Dibromochloromethane	0.08	0.67	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Ethanol	NS	NS	*< 0.05*	*< 0.05*	*< 0.05*	*< 0.05*
Ethyl acetate	0.62	290	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*

Table 11
Sewer Manhole Water Sampling Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L06-MH-CW11 21-Apr-17	ERM-L06-MH-M6 20-Apr-17	ERM-L11-MH-S15 20-Apr-17	ERM-L13-MH-CW21 20-Apr-17
Ethylbenzene	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methylene chloride	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	12	NS	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.005	1.3	< 0.0005	< 0.0005	< 0.0005	0.004
Tetrahydrofuran	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	0.005	0.11	< 0.0005	< 0.0005	0.002	0.002
Vinyl chloride	0.002	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Semi Volatile Organic Compounds, mg/L						
1,2,4-Trichlorobenzene	0.07	1	< 0.0005	< 0.0005	0.021	0.003
1,2-Dichlorobenzene	0.6	69	< 0.0005	< 0.0005	0.0005 J	< 0.0005
1,3-Dichlorobenzene	0.6	NS	< 0.0005	< 0.0005	0.005	0.001
1,4-Dichlorobenzene	0.075	0.68	< 0.0005	< 0.0005	0.003	0.0006 J
2,2-Oxybis(1-chloropropane)	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	0.002	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	0.0002	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	0.00026	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	0.00055	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	1.8	NS	< 0.002	< 0.002	0.005 J	< 0.002
Bis(2-chloroethoxy)methane	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	0.006	NS	< 0.002	< 0.002	< 0.002	< 0.002
Carbazole	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	12	NS	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	93	NS	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Table 11
Sewer Manhole Water Sampling Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L06-MH-CW11 21-Apr-17	ERM-L06-MH-M6 20-Apr-17	ERM-L11-MH-S15 20-Apr-17	ERM-L13-MH-CW21 20-Apr-17
Hexachlorobenzene	0.001	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*	*< 0.0001*
Hexachlorobutadiene	0.044	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Hexachlorocyclopentadiene	0.05	NS	*< 0.005*	*< 0.005*	*< 0.005*	*< 0.005*
Hexachloroethane	0.001	0.48	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*
Indeno(1,2,3-cd)pyrene	0.0028	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*	*< 0.0001*
Isophorone	0.1	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Naphthalene	0.1	1.3	*< 0.0001*	*< 0.0001*	*< 0.0001*	*< 0.0001*
Nitrobenzene	0.23	21	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
n-Nitrosodi-n-propylamine	0.00049	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
n-Nitrosodiphenylamine	0.69	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
o-Cresol	5.8	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
p-Chloroaniline	0.017	NS	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*
p-Cresol	0.58	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Pentachlorophenol	0.001	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*
Phenanthrene	1.1	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*	*< 0.0001*
Phenol	2	84,000	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
p-Nitroaniline	0.17	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Pyrene	0.13	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*	*< 0.0001*
Cyanide, mg/L						
Cyanide	0.2	NS	*< 0.0050*	*< 0.0050*	*< 0.0050*	*< 0.0050*

Table 11
Sewer Manhole Water Sampling Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L17-MH-M26 20-Apr-17	ERM-L18-MH-S28 20-Apr-17	ERM-L19-MH-M10 20-Apr-17	ERM-L23-MH-CW30 21-Apr-17
Inorganics Field Filtered, mg/L						
Aluminum	NS	NS	*< 0.0868*	*< 0.0868*	*< 0.0868*	*< 0.0868*
Antimony	0.006	NS	*< 0.0077*	*< 0.0077*	*< 0.0077*	*< 0.0077*
Arsenic	0.01	NS	*< 0.0097*	*< 0.0097*	*< 0.0097*	*< 0.0097*
Barium	2	NS	0.0495	0.0494	0.0564	0.0439
Beryllium	0.004	NS	*< 0.00067*	*< 0.00067*	*< 0.00067*	*< 0.00067*
Cadmium	0.005	NS	0.00083 J	*< 0.00049*	*< 0.00049*	0.00052 J
Calcium	NS	NS	82.6	59.7	89.3	54.8
Chromium	0.1	NS	*< 0.0018*	*< 0.0018*	*< 0.0018*	*< 0.0018*
Cobalt	0.035	NS	*< 0.0019*	*< 0.0019*	*< 0.0019*	*< 0.0019*
Copper	1	NS	0.0052 J	*< 0.0041*	*< 0.0041*	*< 0.0041*
Iron	NS	NS	1.09	0.295	*< 0.0747*	0.118 J
Lead	0.005	NS	*< 0.0062*	*< 0.0062*	*< 0.0062*	*< 0.0062*
Magnesium	NS	NS	15.0	7.53	14.8	7.56
Manganese	0.3	NS	**0.409**	0.173	0.0448	0.102
Nickel	0.1	NS	0.0038 J	*< 0.0028*	*< 0.0028*	*< 0.0028*
Potassium	NS	NS	5.09	4.86	4.45	4.20
Selenium	0.05	NS	*< 0.0097*	*< 0.0097*	*< 0.0097*	*< 0.0097*
Silver	0.1	NS	*< 0.0019*	*< 0.0019*	*< 0.0019*	*< 0.0019*
Sodium	NS	NS	75.9	62.4	48.1	42.3
Thallium	0.002	NS	*< 0.0094*	*< 0.0094*	*< 0.0094*	*< 0.0094*
Vanadium	0.0082	NS	*< 0.0016*	0.0019 J	*< 0.0016*	*< 0.0016*
Zinc	2	NS	0.0509	0.0056 J	0.0315	0.0994
Mercury Field Filtered, mg/L						
Mercury	0.002	NS	*< 0.000050*	*< 0.000050*	*< 0.000050*	*< 0.000050*
Ethylene Glycol, mg/L						
Ethylene glycol	14	1,000,000	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
PCBs, mg/L						
Aroclor 1016	0.0017	NS	*< 0.000080*	*< 0.000085*	*< 0.000081*	*< 0.000082*
Aroclor 1221	0.0017	0.053	*< 0.000080*	*< 0.000085*	*< 0.000081*	*< 0.000082*
Aroclor 1232	0.0017	0.055	*< 0.00016*	*< 0.00017*	*< 0.00016*	*< 0.00016*
Aroclor 1242	0.0017	NS	*< 0.000080*	*< 0.000085*	*< 0.000081*	*< 0.000082*
Aroclor 1248	0.0017	NS	*< 0.000080*	*< 0.000085*	*< 0.000081*	*< 0.000082*
Aroclor 1254	0.0017	NS	*< 0.000080*	*< 0.000085*	*< 0.000081*	*< 0.000082*
Aroclor 1260	0.0017	NS	*< 0.00012*	*< 0.00013*	*< 0.00012*	*< 0.00012*
Volatile Organic Compounds, mg/L						
1,1,1-Trichloroethane	0.2	160	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,1,2,2-Tetrachloroethane	0.0043	0.82	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,1,2-Trichloroethane	0.005	0.14	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,1-Dichloroethane	0.16	1.6	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,1-Dichloroethene	0.007	3.8	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,2-Dichloroethane	0.005	0.51	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
1,2-Dichloropropane	0.005	0.56	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
2-Butanone	4	49,000	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*
2-Hexanone	0.26	200	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*
4-Methyl-2-pentanone	9.3	13,000	*< 0.003*	*< 0.003*	*< 0.003*	*< 0.003*
Acetone	110	470,000	*< 0.006*	*< 0.006*	*< 0.006*	*< 0.006*
Benzene	0.005	0.35	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Bromodichloromethane	0.08	0.2	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Bromoform	0.08	30	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Carbon disulfide	6.2	25	*< 0.001*	*< 0.001*	0.003 J	*< 0.001*
Carbon tetrachloride	0.005	0.091	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Chlorobenzene	0.1	9.6	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Chloroethane	1.2	440	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Chloroform	0.08	0.18	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
cis-1,2-Dichloroethene	0.07	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
cis-1,3-Dichloropropene	NS	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Dibromochloromethane	0.08	0.67	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Ethanol	NS	NS	*< 0.05*	0.06 J	*< 0.05*	*< 0.05*
Ethyl acetate	0.62	290	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*

Table 11
Sewer Manhole Water Sampling Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L17-MH-M26 20-Apr-17	ERM-L18-MH-S28 20-Apr-17	ERM-L19-MH-M10 20-Apr-17	ERM-L23-MH-CW30 21-Apr-17
Ethylbenzene	0.7	0.86	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl bromide	0.01	0.33	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methyl chloride	0.03	0.81	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Methylene chloride	0.005	95	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl acetate	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002
n-Butyl alcohol	12	NS	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.1	220	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.005	1.3	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Tetrahydrofuran	0.13	0.13	< 0.004	< 0.004	< 0.004	< 0.004
Toluene	1	430	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	0.1	7.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005
trans-1,3-Dichloropropene	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	0.005	0.11	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	0.002	0.052	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	10	12	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Semi Volatile Organic Compounds, mg/L						
1,2,4-Trichlorobenzene	0.07	1	0.002	< 0.0005	< 0.0005	< 0.0005
1,2-Dichlorobenzene	0.6	69	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,3-Dichlorobenzene	0.6	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,4-Dichlorobenzene	0.075	0.68	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,2-Oxybis(1-chloropropane)	0.3	25	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,5-Trichlorophenol	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4,6-Trichlorophenol	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dichlorophenol	0.02	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dimethylphenol	2.3	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2,4-Dinitrophenol	0.23	NS	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	0.011	NS	< 0.001	< 0.001	< 0.001	< 0.001
2,6-Dinitrotoluene	0.002	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Chloronaphthalene	9.3	NS	< 0.0004	< 0.0004	< 0.0004	< 0.0004
2-Chlorophenol	0.04	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Methylnaphthalene	0.47	4.8	< 0.0001	< 0.0001	< 0.0001	< 0.0001
2-Nitroaniline	1.2	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
2-Nitrophenol	0.93	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
3,3'-Dichlorobenzidine	0.0076	NS	< 0.002	< 0.002	< 0.002	< 0.002
3-Nitroaniline	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Bromophenyl phenyl ether	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chloro-3-methylphenol	12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Chlorophenyl phenyl ether	NS	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
4-Nitrophenol	0.06	NS	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	3.8	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Acenaphthylene	7	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Anthracene	0.066	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)anthracene	0.0049	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(a)pyrene	0.0002	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(b)fluoranthene	0.0012	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	0.00026	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	0.00055	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl butyl phthalate	1.8	NS	< 0.002	< 0.002	< 0.002	< 0.002
Bis(2-chloroethoxy)methane	0.35	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Bis(2-ethylhexyl)phthalate	0.006	NS	< 0.002	< 0.002	< 0.002	< 0.002
Carbazole	0.17	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chrysene	0.0019	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	0.0006	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dibenzofuran	0.12	NS	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dibutyl phthalate	12	NS	< 0.002	< 0.002	< 0.002	< 0.002
Dichloroethyl ether	0.00076	3.6	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Diethyl phthalate	93	NS	< 0.002	< 0.002	< 0.002	< 0.002
Dimethyl phthalate	NS	NS	< 0.002	< 0.002	< 0.002	< 0.002
Dinitro-o-cresol	0.0093	NS	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	1.2	NS	< 0.002	< 0.002	< 0.002	< 0.002
Fluoranthene	0.26	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Fluorene	1.9	NS	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Table 11
Sewer Manhole Water Sampling Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L17-MH-M26 20-Apr-17	ERM-L18-MH-S28 20-Apr-17	ERM-L19-MH-M10 20-Apr-17	ERM-L23-MH-CW30 21-Apr-17
Hexachlorobenzene	0.001	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*	*< 0.0001*
Hexachlorobutadiene	0.044	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Hexachlorocyclopentadiene	0.05	NS	*< 0.005*	*< 0.005*	*< 0.005*	*< 0.005*
Hexachloroethane	0.001	0.48	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*
Indeno(1,2,3-cd)pyrene	0.0028	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*	*< 0.0001*
Isophorone	0.1	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Naphthalene	0.1	1.3	*< 0.0001*	*< 0.0001*	*< 0.0001*	*< 0.0001*
Nitrobenzene	0.23	21	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
n-Nitrosodi-n-propylamine	0.00049	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
n-Nitrosodiphenylamine	0.69	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
o-Cresol	5.8	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
p-Chloroaniline	0.017	NS	*< 0.002*	*< 0.002*	*< 0.002*	*< 0.002*
p-Cresol	0.58	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Pentachlorophenol	0.001	NS	*< 0.001*	*< 0.001*	*< 0.001*	*< 0.001*
Phenanthrene	1.1	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*	*< 0.0001*
Phenol	2	84,000	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
p-Nitroaniline	0.17	NS	*< 0.0005*	*< 0.0005*	*< 0.0005*	*< 0.0005*
Pyrene	0.13	NS	*< 0.0001*	*< 0.0001*	*< 0.0001*	*< 0.0001*
Cyanide, mg/L						
Cyanide	0.2	NS	*< 0.0050*	*< 0.0050*	*< 0.0050*	*< 0.0050*

Table 11
Sewer Manhole Water Sampling Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L23-MH-M21 21-Apr-17
Inorganics Field Filtered, mg/L			
Aluminum	NS	NS	*< 0.0868*
Antimony	0.006	NS	*< 0.0077*
Arsenic	0.01	NS	*< 0.0097*
Barium	2	NS	0.0422
Beryllium	0.004	NS	*< 0.00067*
Cadmium	0.005	NS	0.0014 J
Calcium	NS	NS	273
Chromium	0.1	NS	*< 0.0018*
Cobalt	0.035	NS	0.0025 J
Copper	1	NS	0.0439
Iron	NS	NS	4.27
Lead	0.005	NS	**0.0764**
Magnesium	NS	NS	28.1
Manganese	0.3	NS	0.184
Nickel	0.1	NS	0.0404
Potassium	NS	NS	15.8
Selenium	0.05	NS	*< 0.0097*
Silver	0.1	NS	*< 0.0019*
Sodium	NS	NS	31.4
Thallium	0.002	NS	*< 0.0094*
Vanadium	0.0082	NS	*< 0.0016*
Zinc	2	NS	0.336
Mercury Field Filtered, mg/L			
Mercury	0.002	NS	*< 0.000050*
Ethylene Glycol, mg/L			
Ethylene glycol	14	1,000,000	*< 5.0*
PCBs, mg/L			
Aroclor 1016	0.0017	NS	*< 0.000081*
Aroclor 1221	0.0017	0.053	*< 0.000081*
Aroclor 1232	0.0017	0.055	*< 0.00016*
Aroclor 1242	0.0017	NS	*< 0.000081*
Aroclor 1248	0.0017	NS	*< 0.000081*
Aroclor 1254	0.0017	NS	*< 0.000081*
Aroclor 1260	0.0017	NS	*< 0.00012*
Volatile Organic Compounds, mg/L			
1,1,1-Trichloroethane	0.2	160	*< 0.0005*
1,1,2,2-Tetrachloroethane	0.0043	0.82	*< 0.0005*
1,1,2-Trichloroethane	0.005	0.14	*< 0.0005*
1,1-Dichloroethane	0.16	1.6	*< 0.0005*
1,1-Dichloroethene	0.007	3.8	*< 0.0005*
1,2-Dichloroethane	0.005	0.51	*< 0.0005*
1,2-Dichloropropane	0.005	0.56	*< 0.0005*
2-Butanone	4	49,000	*< 0.003*
2-Hexanone	0.26	200	*< 0.003*
4-Methyl-2-pentanone	9.3	13,000	*< 0.003*
Acetone	110	470,000	*< 0.006*
Benzene	0.005	0.35	*< 0.0005*
Bromodichloromethane	0.08	0.2	*< 0.0005*
Bromoform	0.08	30	*< 0.0005*
Carbon disulfide	6.2	25	*< 0.001*
Carbon tetrachloride	0.005	0.091	*< 0.0005*
Chlorobenzene	0.1	9.6	*< 0.0005*
Chloroethane	1.2	440	*< 0.0005*
Chloroform	0.08	0.18	*< 0.0005*
cis-1,2-Dichloroethene	0.07	NS	*< 0.0005*
cis-1,3-Dichloropropene	NS	NS	*< 0.0005*
Dibromochloromethane	0.08	0.67	*< 0.0005*
Ethanol	NS	NS	*< 0.05*
Ethyl acetate	0.62	290	*< 0.001*

Table 11
Sewer Manhole Water Sampling Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L23-MH-M21 21-Apr-17
Ethylbenzene	0.7	0.86	< 0.0005
Methyl bromide	0.01	0.33	< 0.0005
Methyl chloride	0.03	0.81	< 0.0005
Methylene chloride	0.005	95	< 0.002
n-Butyl acetate	NS	NS	< 0.002
n-Butyl alcohol	12	NS	< 0.1
Styrene	0.1	220	< 0.001
Tetrachloroethene	0.005	1.3	< 0.0005
Tetrahydrofuran	0.13	0.13	< 0.004
Toluene	1	430	< 0.0005
trans-1,2-Dichloroethene	0.1	7.6	< 0.0005
trans-1,3-Dichloropropene	NS	NS	< 0.0005
Trichloroethene	0.005	0.11	< 0.0005
Vinyl chloride	0.002	0.052	< 0.0005
Xylenes	10	12	< 0.0005
Semi Volatile Organic Compounds, mg/L			
1,2,4-Trichlorobenzene	0.07	1	< 0.0005
1,2-Dichlorobenzene	0.6	69	< 0.0005
1,3-Dichlorobenzene	0.6	NS	< 0.0005
1,4-Dichlorobenzene	0.075	0.68	< 0.0005
2,2-Oxybis(1-chloropropane)	0.3	25	< 0.0005
2,4,5-Trichlorophenol	12	NS	< 0.0005
2,4,6-Trichlorophenol	0.12	NS	< 0.0005
2,4-Dichlorophenol	0.02	NS	< 0.0005
2,4-Dimethylphenol	2.3	NS	< 0.0005
2,4-Dinitrophenol	0.23	NS	< 0.01
2,4-Dinitrotoluene	0.011	NS	< 0.001
2,6-Dinitrotoluene	0.002	NS	< 0.0005
2-Chloronaphthalene	9.3	NS	< 0.0004
2-Chlorophenol	0.04	NS	< 0.0005
2-Methylnaphthalene	0.47	4.8	< 0.0001
2-Nitroaniline	1.2	NS	< 0.0005
2-Nitrophenol	0.93	NS	< 0.0005
3,3'-Dichlorobenzidine	0.0076	NS	< 0.002
3-Nitroaniline	NS	NS	< 0.0005
4-Bromophenyl phenyl ether	NS	NS	< 0.0005
4-Chloro-3-methylphenol	12	NS	< 0.0005
4-Chlorophenyl phenyl ether	NS	NS	< 0.0005
4-Nitrophenol	0.06	NS	< 0.01
Acenaphthene	3.8	NS	< 0.0001
Acenaphthylene	7	NS	< 0.0001
Anthracene	0.066	NS	< 0.0001
Benzo(a)anthracene	0.0049	NS	< 0.0001
Benzo(a)pyrene	0.0002	NS	< 0.0001
Benzo(b)fluoranthene	0.0012	NS	< 0.0001
Benzo(g,h,i)perylene	0.00026	NS	< 0.0001
Benzo(k)fluoranthene	0.00055	NS	< 0.0001
Benzyl butyl phthalate	1.8	NS	< 0.002
Bis(2-chloroethoxy)methane	0.35	NS	< 0.0005
Bis(2-ethylhexyl)phthalate	0.006	NS	< 0.002
Carbazole	0.17	NS	< 0.0005
Chrysene	0.0019	NS	< 0.0001
Dibenzo(a,h)anthracene	0.0006	NS	< 0.0001
Dibenzofuran	0.12	NS	< 0.0005
Dibutyl phthalate	12	NS	< 0.002
Dichloroethyl ether	0.00076	3.6	< 0.0005
Diethyl phthalate	93	NS	< 0.002
Dimethyl phthalate	NS	NS	< 0.002
Dinitro-o-cresol	0.0093	NS	< 0.005
Di-n-octyl phthalate	1.2	NS	< 0.002
Fluoranthene	0.26	NS	< 0.0001
Fluorene	1.9	NS	< 0.0001

Table 11
Sewer Manhole Water Sampling Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	PADEP_2016 GW NRES	Location ID Sample Date PADEP_2016 GW SHS NR	ERM-L23-MH-M21 21-Apr-17
Hexachlorobenzene	0.001	NS	*< 0.0001*
Hexachlorobutadiene	0.044	NS	*< 0.0005*
Hexachlorocyclopentadiene	0.05	NS	*< 0.005*
Hexachloroethane	0.001	0.48	*< 0.001*
Indeno(1,2,3-cd)pyrene	0.0028	NS	*< 0.0001*
Isophorone	0.1	NS	*< 0.0005*
Naphthalene	0.1	1.3	*< 0.0001*
Nitrobenzene	0.23	21	*< 0.0005*
n-Nitrosodi-n-propylamine	0.00049	NS	*< 0.0005*
n-Nitrosodiphenylamine	0.69	NS	*< 0.0005*
o-Cresol	5.8	NS	*< 0.0005*
p-Chloroaniline	0.017	NS	*< 0.002*
p-Cresol	0.58	NS	*< 0.0005*
Pentachlorophenol	0.001	NS	*< 0.001*
Phenanthrene	1.1	NS	*< 0.0001*
Phenol	2	84,000	*< 0.0005*
p-Nitroaniline	0.17	NS	*< 0.0005*
Pyrene	0.13	NS	*< 0.0001*
Cyanide, mg/L			
Cyanide	0.2	NS	*< 0.0050*

Table 11
Sewer Manhole Water Sampling Summary - 2017
East 10th Street Site
Marcus Hook, Pennsylvania

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
NS = No Standard
Units are in mg/L = milligrams per liter
Shaded cell in the screening column indicates that at least one sample had a reported exceedance of that value
Shaded cell in a sample column indicates that there was an exceedance of a screening value.

Qualifiers - Organic:
J = The result is an estimated value >= the Method Detection Limit
JP = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
All analyses performed by Eurofins Lancaster Laboratory.

PADEP_2016 GW SHS NR are the Groundwater Statewide Health Standard Vapor Intrusion Screening Values, revised November 2016.
PADEP_2016 GW NRES standards are the Pennsylvania Act 2 Medium Specific Concentrations (MSCs), non-residential ground water, TDS ≤ 2500, revised August 2016.

Analysis	**Analytical Method**
Inorganics Field Filtered	Method SW6010B, Dissolved, mg/L
Mercury Field Filtered	Method SW7470A, Dissolved, mg/L
Ethylene Glycol	Method SW8015B, mg/L
PCBs	Method SW8082, mg/L
Volatile Organic Compounds	Method SW8260B, mg/L
Semi Volatile Organic Compounds	Method SW8270C, mg/L
Cyanide	Method SW9012A, mg/L

Table 12
Former Carbon Disufide Storage Moat Area Soil Gas Sample Summary - 2004-2005
East 10th Street Site
Marcus Hook, Pennsylvania

Location ID	**PADEP Non-Residential Near-Source Soil Gas Standard, ug/m3***	SG-1		SG-2		SG-1		SG-2	
Sample Date		12/14/04		12/14/04		2/10/05		2/10/05	
Laboratory ID		AQ 4430271		AQ 4430272		AQ 4463942		AQ 4463943	
Parameter [1]		Converted to ug/m^3	As reported by lab (ppb)	Converted to ug/m^3	As reported by lab (ppb)	Converted to ug/m^3	As reported by lab (ppb)	Converted to ug/m^3	As reported by lab (ppb)
Carbon Disulfide	3,100,000	1.9	0.6 J	726.6	230	1.58 U	0.5 U	1.58 U	0.5 U

Notes:
1 - Samples analyzed for carbon disulfide only, via method TO-15
* - Near-Source Soil Gas Statewide Health Standard Vapor Intrusion Screening Values (SV_{NS}), Non-Residential
J = Estimated Concentration
U = Compound not detected above the noted reporting limit.

Table 13
Near Source Soil Gas Sample Summary - 2017-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Near-source Non Residential soil gas SHS	Sub-slab Non Residential soil gas SHS	ERM-MW-DS-VP-1 18-Dec-17 N 9376436	ERM-MW-DS-VP-1 18-Dec-17 FD 9376433	ERM-MW-DS-VP-1 11-Apr-18 N 9555514	ERM-MW-DS-VP-2 18-Dec-17 N 9376434	ERM-MW-DS-VP-2 02-Feb-18 N 9446789	ERM-MW-DS-VP-2 11-Apr-18 N 9555515	ERM-MW-JS-VP-1 18-Dec-17 N 9376437
Method ETO15, µg/m3										
1,1-Dichloroethene	µg/m3	880,000	110,000							*< 0.79*
1,2,4-Trichlorobenzene	µg/m3	8,800	1,100	*< 3.7*	*< 3.7*	*< 3.7*	*< 3.7*	*< 3.7*	*< 3.7*	
Tetrachloroethene	µg/m3	180,000	22,000	*< 1.4*	*< 1.4*	*< 1.4*	5.7 J	*< 1.4*	*< 1.4*	
Trichloroethene	µg/m3	8,800	1,100	*< 1.1*	*< 1.1*	*< 1.1*	16	*< 1.1*	*< 1.1*	*< 1.1*

Notes:
< = Compound not detected at concentrations
Blank cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
Near-source soil gas SHS: Pennsylvania Near-source soil gas statewide health standard vapor intrusion screening values, nonresidential

Table 13
Near Source Soil Gas Sample Summary - 2017-2018
East 10th Street Site
Marcus Hook, Pennsylvania

Analyte	Unit	Near-source Non Residential soil gas SHS	Sub-slab Non Residential soil gas SHS	ERM-MW-JS-VP-1 30-Apr-18 N 9589351	ERM-MW-JS-VP-1 30-Apr-18 FD 9589350	ERM-MW-JS-VP-2 18-Dec-17 N 9376435	ERM-MW-JS-VP-2 30-Apr-18 N 9589352
Method ETO15, µg/m3							
1,1-Dichloroethene	µg/m3	880,000	110,000	2.1 J	1.9 J	*< 0.79*	*< 0.79*
1,2,4-Trichlorobenzene	µg/m3	8,800	1,100				
Tetrachloroethene	µg/m3	180,000	22,000				
Trichloroethene	µg/m3	8,800	1,100	*< 1.1*	*< 1.1*	*< 1.1*	*< 1.1*

Notes:
< = Compound not detected at concentrations
Blank cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
J = The result is an estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL). (Lancaster)
Near-source soil gas SHS: Pennsylvania Near-source soil gas statewide health standard vapor intrusion screening values, nonresidential

Table 14
Sediment Sample Summary - 2016
East 10th Street Site
Marcus Hook, Pennsylvania

			Upstream			Site								
Sample ID	**EPA Region III BTAG**	**NOAA Screening Quick Reference Tables**	**US-20160707-1**			**ERM-L8-SED-1**			**ERM-L11-SED-2**			**ERM-L13-SED-3**		
Sample Depth (ft)	**Freshwater Sediment**	**Probable Effect**	**0-0.5**			**0-0.5**			**0-0.5**			**0-0.5**		
Date Sampled	**Screening**	**Concentrations**	**7/7/2016**			**7/7/2016**			**7/7/2016**			**7/7/2016**		
Matrix	**Benchmarks (TEC/LEL)**	**(PECs)**	**Sediment**	**BTAG HQ**	**PEC HQ**	**Sediment**	**BTAG HQ**	**PEC HQ**	**Sediment**	**BTAG HQ**	**PEC HQ**	**Sediment**	**BTAG HQ**	**PEC HQ**
Volatile Organic Compounds (VOCs) (mg/kg)														
Carbon Disulfide	0.00085	NS	< 0.001	-	NS	**0.002 J**	**0.0023**	NS	< 0.001	-	NS	**0.002 J**	**0.0023**	NS
Semivolatile Organic Compounds (SVOCs) (mg/kg)														
1,2-Dichlorobenzene	0.0165	NS	< 0.020	-	NS	< 0.034	-	NS	**0.61**	**0.037**	NS	**< 0.027**	**0.0016**	NS
1,4-Dichlorobenzene	0.5986	NS	< 0.020	-	NS	< 0.034	-	NS	**3.9**	**0.007**	NS	0.038 J	0.00001	NS
Chlorobenzene	0.0084	NS	< 0.001	-	NS	< 0.002	-	NS	**0.11**	**0.013**	NS	< 0.002	**-**	NS
Acenaphthene	0.0067	NS	< 0.004	-	NS	< 0.007	-	NS	< 0.020	-	NS	**0.025 J**	**0.0037**	NS
Acenaphthylene	0.0059	NS	< 0.004	-	NS	< 0.007	-	NS	**0.045 J**	**0.008**	NS	< 0.005	-	NS
Anthracene	0.0572	0.845	0.013 J	0.0002	-	< 0.007	-	-	**0.098 J**	**0.002**	0.1	0.013 J	0.0002	-
Benzo(a)anthracene	0.1080	1.05	0.05	0.0005	-	< 0.007	-	-	**0.23**	**0.002**	0.2	0.043	0.0004	-
Benzo(a)pyrene	0.1500	1.045	0.049	0.0003	-	< 0.007	-	-	0.2	0.001	0.2	0.037	0.0002	-
Benzo(b)fluoranthene	0.0272	NS	0.09	0.0033	NS	< 0.007	-	NS	**0.38**	**0.014**	NS	**0.075**	**0.0028**	NS
Benzo(g,h,i)perylene	0.170	NS	0.045	0.0003	NS	< 0.007	-	NS	0.19	0.001	NS	< 0.005	-	NS
bis(2-Ethylhexyl)phthalate	0.180	NS	< 0.080	-	NS	< 0.130	-	NS	**2.1**	**0.012**	NS	< 0.110	0.0006	NS
Chrysene	0.166	1.29	0.082	0.0005	-	< 0.007	-	-	**0.31**	**0.002**	0.2	0.087	0.0005	-
Fluoranthene	0.423	2.23	0.12	0.0003	-	**0.015 J**	**-**	**-**	0.6	0.001	0.3	0.041	0.0001	-
Indeno(1,2,3-cd)pyrene	0.017	NS	0.032	0.0019	NS	< 0.007	-	NS	**0.15**	**0.009**	NS	0.023 J	0.0014	NS
Phenanthrene	0.204	1.17	0.07	0.0003	-	0.028 J	0.00014	**-**	0.3	0.001	0.3	0.033	0.0002	-
Pyrene	0.195	1.52	0.12	0.0006	-	0.014 J	0.00007	**-**	**0.55**	**0.003**	0.4	0.064	0.0003	-
PCBs (mg/kg)														
PCB-1260 (Total PBC value)	0.0598	0.676	< 0.006	-	-	< 0.0099	-	-	**0.53**	**0.009**	0.0008	**2.4**	**0.040**	**0.004**
Metals (mg/kg)														
Antimony	2	NS	< 0.706	-	NS	< 0.981	-	NS	< 0.645	-	-	**48.7**	**24**	**NS**
Arsenic	9.8	33	< 0.979	-	-	10.5	1	0.3	4.14	0.4	0.1	8.78	0.9	-
Chromium	43.4	111	21.4	0.5	-	49.7	1	0.4	22.3	0.5	0.2	44.2	1	0.4
Cyanide	0.1	NS	< 0.22		NS	< 0.36	-	NS	**0.85**	**9**	NS	< 0.30	-	NS
Iron	20000	NS	9,840	0.5	NS	**32,700**	**2**	**NS**	13,600	0.7	NS	28,200	1	NS
Lead	35.8	128	11.2	0.3	-	11.6	0.3	-	35.6	1	0.3	**1,200**	**34**	**9.4**
Manganese	460	NS	127	0.3	-	471	1	NS	374	0.8	NS	392	0.9	NS
Nickel	22.7	48.6	7.23	0.3	-	25.3	1	0.5	16.1	0.7	0.3	27.0	1	0.6

Notes:
Highlighted values have an HQ greater than 1.
- = Indicates HQ less than 0.1
< = Indicates parameter was not detected at the listed method detection limit.
J = Estimated value – the result falls between the Method Detection Limit (MDL) and Limit of Quantitation (LOQ).
NS = sediment screening values are not available for this parameter.

Table 15
Vertical Gradient Summary - 2016-2018
East 10th Street Site
Marcus Hook, Pennsylvania

	GWE Feet AMSL			
	AS	**AD**	**Difference**	**Gradient**
May-16	23.57	23.38	0.19	Downward
Oct-16	22.69	22.90	-0.21	Upward
Jan-17	23.16	22.98	0.18	Downward
Mar-17	23.97	23.65	0.32	Downward
Aug-17	23.17	22.96	0.21	Downward
Oct-17	22.01	22	0.01	Downward
Jan-18	22.16	22.18	-0.02	Upward
Mar-18	23.05	23.03	0.02	Downward

	GWE Feet AMSL			
	DS	**DD**	**Difference**	**Gradient**
May-16	11.88	11.44	0.44	Downward
Oct-16	8.99	8.69	0.30	Downward
Jan-17	8.98	8.77	0.21	Downward
Mar-17	10.78	10.40	0.38	Downward
Aug-17	10.35	10.05	0.30	Downward
Oct-17	9.53	9.23	0.3	Downward
Jan-18	9.14	8.86	0.28	Downward
Mar-18	11.14	10.79	0.35	Downward

	GWE Feet AMSL			
	JS	**JD**	**Difference**	**Gradient**
May-16	11.18	11.80	-0.62	Upward
Oct-16	10.03	10.50	-0.47	Upward
Jan-17	10.06	10.56	-0.50	Upward
Mar-17	10.89	11.45	-0.56	Upward
Aug-17	10.53	11.01	-0.48	Upward
Oct-17	9.85	10.35	-0.5	Upward
Jan-18	9.73	10.24	-0.51	Upward
Mar-18	10.92	11.66	-0.74	Upward

	GWE Feet AMSL			
	BS	**BD**	**Difference**	**Gradient**
May-16	5.36	6.31	-0.95	Upward
Oct-16	4.78	6.64	-1.86	Upward
Jan-17	5.13	4.56	0.57	Downward
Mar-17	7.26	5.37	1.89	Downward
Aug-17	5.89	5.33	0.56	Downward
Oct-17	3.26	4.79	-1.53	Upward
Jan-18	4.46	4.5	-0.04	Upward
Mar-18	7.2	6.2	1	Downward

	GWE Feet AMSL			
	DD	**DDD**	**Difference**	**Gradient**
May-16	11.44	11.74	-0.30	Upward
Oct-16	8.69	8.81	-0.12	Upward
Jan-17	8.77	8.84	-0.07	Upward
Mar-17	10.40	10.40	0.00	NA
Aug-17	10.05	10.14	-0.09	Upward
Oct-17	9.23	9.3	-0.07	Upward
Jan-18	8.86	8.93	-0.07	Upward
Mar-18	10.79	10.87	-0.08	Upward

	GWE Feet AMSL			
	NS	**ND**	**Difference**	**Gradient**
May-16	16.56	18.29	-1.73	Upward
Oct-16	14.56	17.46	-2.90	Upward
Jan-17	14.96	17.39	-2.43	Upward
Mar-17	15.58	17.79	-2.21	Upward
Aug-17	16.03	17.89	-1.86	Upward
Oct-17	14.98	17.36	-2.38	Upward
Jan-18	14.31	17.23	-2.92	Upward
Mar-18	16.92	18.35	-1.43	Upward

	GWE Feet AMSL			
	CS	**CD**	**Difference**	**Gradient**
May-16	5.25	3.00	2.25	Downward
Oct-16	4.28	3.38	0.90	Downward
Jan-17	3.80	1.95	1.85	Downward
Mar-17	4.84	3.31	1.53	Downward
Aug-17	4.25	2.67	1.58	Downward
Oct-17	2.2	2	0.2	Downward
Jan-18	3.15	1.52	1.63	Downward
Mar-18	5.83	4.17	1.66	Downward

	GWE Feet AMSL			
	DDD	**D3**	**Difference**	**Gradient**
May-16	11.74	9.25	2.49	Downward
Oct-16	8.81	7.54	1.27	Downward
Jan-17	8.84	7.62	1.22	Downward
Mar-17	10.40	8.36	2.04	Downward
Aug-17	10.14	8.95	1.19	Downward
Oct-17	9.3	8.13	1.17	Downward
Jan-18	8.93	7.76	1.17	Downward
Mar-18	10.87	10.06	0.81	Downward

	GWE Feet AMSL			
	PS	**PD**	**Difference**	**Gradient**
May-16	16.96	16.22	0.74	Downward
Oct-16	14.89	14.11	0.78	Downward
Jan-17	14.92	14.06	0.86	Downward
Mar-17	15.71	14.90	0.81	Downward
Aug-17	16.08	15.28	0.80	Downward
Oct-17	15	14.29	0.71	Downward
Jan-18	14.53	13.82	0.71	Downward
Mar-18	16.59	15.89	0.7	Downward

Table 15
Vertical Gradient Summary - 2016-2018
East 10th Street Site
Marcus Hook, Pennsylvania

	GWE Feet AMSL			
	CD	**CDD**	**Difference**	**Gradient**
May-16	3.00	9.38	-6.38	Upward
Oct-16	3.38	7.45	-4.07	Upward
Jan-17	1.95	7.39	-5.44	Upward
Mar-17	3.31	8.43	-5.12	Upward
Aug-17	2.67	8.42	-5.75	Upward
Oct-17	2	7.73	-5.73	Upward
Jan-18	1.52	7.32	-5.80	Upward
Mar-18	4.17	9.9	-5.73	Upward

	GWE Feet AMSL			
	FD	**FDD**	**Difference**	**Gradient**
May-16	11.13	8.28	2.85	Downward
Oct-16	8.70	6.78	1.92	Downward
Jan-17	8.70	6.86	1.84	Downward
Mar-17	10.06	7.58	2.48	Downward
Aug-17	10.41	7.59	2.82	Downward
Oct-17	9.37	6.77	2.6	Downward
Jan-18	9.03	6.57	2.46	Downward
Mar-18	11.9	8.27	3.63	Downward

	GWE Feet AMSL			
	Lot 1 MW-5	**Lot 1 MW-5D**	**Difference**	**Gradient**
May-16	24.12	24.16	-0.04	Upward
Oct-16	22.82	22.77	0.05	Downward
Jan-17	23.22	23.25	-0.03	Upward
Mar-17	23.85	23.96	-0.11	Upward
Aug-17	23.23	23.14	0.09	Downward
Oct-17	22.12	22.03	0.09	Downward
Jan-18	22.23	22.19	0.04	Downward
Mar-18	23.39	23.3	0.09	Downward

	GWE Feet AMSL			
	CDD	**C3**	**Difference**	**Gradient**
May-16	9.38	9.16	0.22	Downward
Oct-16	7.45	8.72	-1.27	Upward
Jan-17	7.39	8.64	-1.25	Upward
Mar-17	8.43	8.94	-0.51	Upward
Aug-17	8.42	9.26	-0.84	Upward
Oct-17	7.73	8.7	-0.97	Upward
Jan-18	7.32	8.4	-1.08	Upward
Mar-18	9.9	9.52	0.38	Downward

	GWE Feet AMSL			
	ID	**IDD**	**Difference**	**Gradient**
May-16	7.05	4.14	2.91	Downward
Oct-16	5.33	3.25	2.08	Downward
Jan-17	5.60	3.37	2.23	Downward
Mar-17	6.28	3.80	2.48	Downward
Aug-17	6.34	3.54	2.80	Downward
Oct-17	6.08	2.95	3.13	Downward
Jan-18	5.38	2.87	2.51	Downward
Mar-18	6.82	1.99	4.83	Downward

Appendices

APPENDIX A – WATER LEVEL STUDY TRANSDUCER DATA

(PROVIDED ON FLASH DRIVE)

APPENDIX B – SLUG TEST DATA

(PROVIDED ON FLASH DRIVE)

APPENDIX C – ECOLOGICAL RISK ASSESSMENT

(PROVIDED ON FLASH DRIVE)

APPENDIX D - SOIL BORING LOGS

(PROVIDED ON FLASH DRIVE)

APPENDIX E - MONITORING WELL LOGS

(PROVIDED ON FLASH DRIVE)

APPENDIX F - GEOPHYSICAL LOGS

(PROVIDED ON FLASH DRIVE)

APPENDIX G – WATER TABLE POTENTIOMETRIC FIGURES

(PROVIDED ON FLASH DRIVE)

APPENDIX H – 1965 PLOT PLAN

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APPENDIX I – GORE SORBER FIGURES

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APPENDIX J - LABORATORY ANALYTICAL REPORTS – SOIL

(PROVIDED ON FLASH DRIVE)

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APPENDIX L - TOBIT TREND ANALYSIS

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APPENDIX N - LABORATORY ANALYTICAL REPORTS - NEAR-SOURCE VAPOR

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APPENDIX P -- HUMAN HEALTH RISK ASSESSMENT

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APPENDIX Q – SW LOAD, QUICK DOMENICO, AND CORMIX MODELLING

(PROVIDED ON FLASH DRIVE)

APPENDIX R – SITE CONCEPTUAL MODEL SUPPORTING EVALUATION AND FIGURES

(PROVIDED ON FLASH DRIVE)