



Land Recycling Program Transmittal Sheet for Plan/Report Submission

Instructions: Please provide all requested information in each of the four sections. This transmittal sheet shall accompany any plan/report submitted to the Department under the Land Recycling Program. Proper completion of the Transmittal Sheet will assist Department review and may avoid a finding of plan/report deficiency. The Facility ID number can be obtained from the Department's Environmental Cleanup Program in the region where the site is located.

Section 1 - Site Identification

eFACTS Facility ID _____

Site Name Plaza 2331

Site Address 2331 East Market Street

Municipality and County Springettsbury Township, York County

Section 2 - Remediation Standard . . Plan/Report . . Fees

Identify the remediation standard being pursued and the type of plan/report being submitted. Please note required Department fees follow each type of plan/report.

Check the relevant standard and the type of plan/report being submitted.

- | | | |
|--|---|--|
| <input type="checkbox"/> Background Standard
Final Report (\$250 fee) | <input type="checkbox"/> Statewide Health Standard*
Final Report (\$250 fee) | |
| <input type="checkbox"/> Site-Specific Standard | <input type="checkbox"/> Special Industrial Area | |
| <input checked="" type="checkbox"/> Remedial Investigation Report
(\$250 fee) | <input type="checkbox"/> Work Plan
(no fee) | |
| <input type="checkbox"/> Risk Assessment Report
(\$250 fee) | <input type="checkbox"/> Baseline Environmental Report
(no fee) | |
| <input type="checkbox"/> Cleanup Plan (\$250 fee) | *A final report submitted under a combination of cleanup standards should be accompanied with a fee representing the higher of the two standards' final report fee. | |
| <input type="checkbox"/> Final Report (\$500 fee)* | | |

Ensure your check covers all required fees and is made payable to the **Commonwealth of Pennsylvania**.

Section 3 - Municipal/Public Notice Confirmation

There are two stages in the Land Recycling Program where municipal and public notices are required. Read the information associated with each stage. You will be asked to confirm that information establishing your compliance with these notification requirements has been included with this submission.

- Check here if you are planning to meet the Background or Statewide Health Standard and your Final Report has been submitted within 90 days of the release.

Indicate date of release here _____

No further completion of this section is required if your Final Report for these two standards conforms to the 90 day time frame.

Stage 1 - Notice of Intent to Remediate (NIR)

- Check here to confirm you have included proof that a copy of your NIR was provided to each municipality where your site is located. Proof will be a copy of your cover letter and a copy of a signed certified mail receipt slip from the municipality.
- Check here to confirm a copy of a proof of publication document from a newspaper serving the area of your site has been included with this submission.
- Check here to indicate that a Site-Specific Standard or a Special Industrial Area is involved and a municipal request was received for development of a public involvement plan. The plan/report submission shall include municipality and public comments, which were submitted, and your responses to those comments.

Stage 2 - Cleanup Plan/Report Submission

June 29, 2020 Place date here that each municipality was notified of any plan or report submitted under any of the three remediation standards.

The York Dispatch/York Sunday News and York Daily Record June 30, 2020 Place the newspaper name and date that your notice of your plan/report submission was published.

Section 4 - Project Contact

On the lines below, place the name, company, mailing addresses and business phone number of the individuals who can be contacted regarding this submission:

Consultant
Contact Person/Title: <u>Steven R. Vedder / Senior Project Manager</u>
Phone Number <u>717-585-1963</u>
Email Address <u>svedder@wcgrp.com</u>
Company Name: <u>Weaver Consultants Group, LLC</u>
Mailing Address (street, city, state, zip) <u>2225 Sycamore Street, Harrisburg, Pennsylvania 17111</u>
Remediator
Contact Person/Title: <u>Satya Ganti</u>
Phone Number <u>717-779-0040</u>
Email Address <u>satyaganti@sarvabioremed.com</u>
Company Name: <u>2331 East Market Street LLC</u>
Mailing Address (street, city, state, zip) <u>25 Marianne Drive, York, Pennsylvania 17406</u>
Other
Contact Person/Title: _____
Relationship to Site _____ (e.g. owner, participant in cleanup, responsible party, etc.)
Phone Number _____
Email Address _____
Company Name: _____
Mailing Address (street, city, state, zip) _____

STEVEN R VEDDER 11/07
PH. 717-932-8995
PH. 717-938-1818
175 MAPLE HILL DR.
ETTERS, PA 17319-9618

60-682/433

156

DATE

12/22/21
PMP

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york daily record

PART OF THE USA TODAY NETWORK

MILLER ENVIRONMENTAL GROUP, INC.
1539 BOBALI DRIVE
HARRISBURG, PA 17104

Publication Cost: \$465.00
Ad No: 0004261342
Customer No: 7175644200MILL
PO #:
of Affidavits 1

This is not an invoice

Affidavit of Publication

Proof of Publication State of Pennsylvania

The York Dispatch/York Sunday News and York Daily Record is the name of the newspaper(s) of general circulation published continuously for more than six months at its principle place of business, 1891 Loucks Road, York, PA 17408.

The printed copy of the advertisement hereto attached is a true copy, exactly as printed and published, of an advertisement printed in the regular issues of the said The York Dispatch/York Sunday News and York Daily Record published on the following dates, viz:

Date of Publication: 06/30/2020

I, being first duly sworn upon oath depose and say that I am a legal clerk and employee of The York Dispatch/York Sunday News and York Daily Record and have personal knowledge of the publication of the advertisement mentioned in the foregoing statement as to the time, place and character of publications are true, and that the affiant is not interested in the subject matter of the above mentioned advertisement.



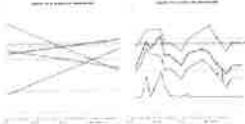
Subscribed and sworn to before on June 30, 2020:


Notary, State of Wisconsin, County of Brown
My commission expires

PANG PAPPATHOPOULOS
Notary Public
State of Wisconsin

Pursuant to Pennsylvania's Land Recycling and Environmental Remediation Standards Act, the act of May 19, 1995, P.L. 4, No. 2, (Act 2), notice is hereby given that on behalf of 2331 East Market Street, LLC and Barbara Elliot (Property Owner), Environmental Products & Services of Vermont, Inc. will be submitting to the Pennsylvania Department of Environmental Protection (PADEP) a Remedial Investigation Report and/or Cleanup Plan to document characterization and remediation activities completed and proposed to address chlorinated solvent contamination impacting the soil and groundwater for the property located at 2331 East Market Street in Springettsbury Township, York County, Pennsylvania. A previously submitted Remedial Investigation/Final Report states the site is a multi-tenant commercial property that was formerly occupied by a dry cleaning operation. The proposed remediation measures will be attainment of a combination of the statewide health and site-specific cleanup standards under Act 2.

Remediation measures completed and proposed included/include engineering/institutional controls to eliminate unacceptable exposure risks, as well as in-situ treatment of soil contamination and the mitigation of the vapor intrusion pathway via application of the bioremediation compounds AgroRemed® and VapoRemed®. Figures depicting chlorinated solvent contaminant concentrations documented in soil and indoor air during application of AgroRemed® and VapoRemed® are present below.



The proposed future use of the site will remain as a non-residential property. 2331 East Market Street, LLC and the Property Owner plan to use the site-specific standard at the site. The Act provides for a 30-day public comment period for site-specific standard remediations. The 30-day comment period is initiated with the publication of this notice. Until July 30, 2020, Springettsbury Township may submit a request to 2331 East Market Street, LLC and/or the Property Owner to be involved in the development of the remediation and reuse plans for the site. Springettsbury Township may also submit a request to 2331 East Market Street, LLC and the Property Owner during this 30-day comment period to develop and implement a public involvement plan. Copies of these requests and of any comments should also be submitted to Mr. Ryan Carr of the PADEP at 909 Elmerton Avenue, Harrisburg, Pennsylvania 17110.

Upon completion of all necessary remedial activities, Final Report will be submitted to the PADEP for review demonstrating attainment of a combination of the Statewide Health and Site-Specific Standards set forth in Act 2.

This notice is made under the provision of Act 2, the Act of May 19, 1995, P.L. 4, No. 2.



1539 Bobali Drive, Harrisburg, PA 17104
717-564-4200

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

June 29, 2020

Springettsbury Township Board of Supervisors

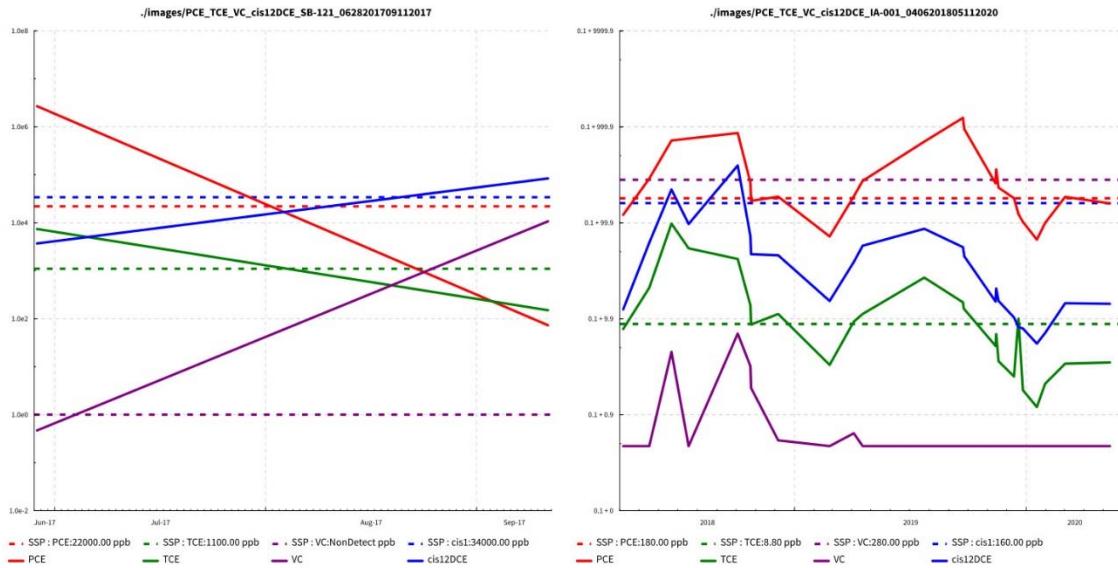
Springettsbury Township
1501 Mount Zion Road
York, Pennsylvania 17402

RE: Notice of Submission of Remedial Investigation Report and/or Cleanup Plan
Plaza 2331
2331 East Market Street
Springettsbury Township, York County, Pennsylvania
EPSVT Project No. G11788

Dear Township Supervisors:

Notice is hereby given that on behalf of 2331 East Market Street, LLC and Barbara Elliot (Property Owner), Environmental Products & Services of Vermont, Inc. will be submitting to the Pennsylvania Department of Environmental Protection (PADEP) a Remedial Investigation Report and/or Cleanup Plan (Plan) for the property known as Plaza 2331 located at 2331 East Market Street in Springettsbury Township, York County, Pennsylvania. The Plan will document characterization and remediation activities completed and proposed to address chlorinated solvent contamination impacting the soil and groundwater at the Site. A previously submitted Remedial Investigation/Final Report states the site is a multi-tenant commercial property that was formerly occupied by a dry cleaning operation. The proposed remediation measures will be attainment of a combination of the statewide health and site-specific cleanup standards under Act 2.

Remediation measures completed and proposed included/include engineering/institutional controls to eliminate unacceptable exposure risks, as well as in-situ treatment of soil contamination and the mitigation of the vapor intrusion pathway via application of the bioremediation compounds AgroRemed® and VapoRemed®. Figures depicting chlorinated solvent contaminant concentrations documented in soil and indoor air during application of AgroRemed® and VapoRemed® are present below.



The proposed future use of the site will remain as a non-residential property.

2331 East Market Street, LLC and the Property Owner plan to use the site-specific standard at the site. The Act provides for a 30-day public comment period for site-specific standard remediations. The 30-day comment period is initiated with the publication of this notice in the York Daily Dispatch on June 30, 2020. Until July 30, 2020, Springettsbury Township may submit a request to 2331 East Market Street, LLC and/or the Property Owner to be involved in the development of the remediation and reuse plans for the site. Springettsbury Township may also submit a request to 2331 East Market Street, LLC and the Property Owner during this 30-day comment period to develop and implement a public involvement plan. Copies of these requests and of any comments should also be submitted to Mr. Ryan Carr of the PADEP at 909 Elmerton Avenue, Harrisburg, Pennsylvania 17110.

Upon completion of all necessary remedial activities, a Final Report will be submitted to the PADEP for review demonstrating attainment of a combination of the Statewide Health and Site-Specific Standards set forth in Act 2.

This notice is made under the provision of Act 2, the Act of May 19, 1995, P.L. 4, No. 2. If you have any questions or comments regarding the plan submittal and/or the proposed remediation, please contact the undersigned at your convenience.

Respectfully submitted,
Environmental Products & Services of Vermont, Inc.

Steven R. Vedder
 Project Manager

November 10, 2021

Project No. 0693-300-04-01

REMEDIAL INVESTIGATION REPORT

2331 East Market Street, LLC

**2331 EAST MARKET STREET
SPRINGETTSBURY TOWNSHIP
YORK COUNTY, PENNSYLVANIA**

PREPARED BY



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- Attachment A** Site Location Map
- Attachment B** Site Building Floor Plans
- Attachment C** Previous Reports
- Attachment D** Data Summary Tables
- Attachment E** Sample Location Mapping
- Attachment F** PNDI Search Receipt
- Attachment G** Personnel Qualifications

1 SUMMARY

At the request of 2331 East Market Street, LLC, Weaver Consultants Group (WCG) has prepared this Remedial Investigation Report (RIR) to document the implementation of the Vapor Intrusion Assessment/Mitigation Work Plan and to summarize the remedial efforts for the property located at 2331 East Market Street, York County, Pennsylvania (Subject Property). This RIR was prepared in general accordance with the *Pennsylvania Code Title 25 Environmental Protection Chapter 250 Administration of Land Recycling Program Section 408 Remedial Investigation Report (25 Pa. Code § 250.408)*.

The current scope of work conducted at the Subject Property by 2331 East Market Street, LLC was implemented to remediate impacts to the soil media and mitigate the vapor intrusion exposure pathway utilizing bioremediation. The bioremediation activities were implemented between June 1, 2017, and June 30, 2020. Previous investigation completed by others including SSM Group, Inc. (SSM), ARM Group Inc. (ARM), and Independence Environmental Consulting, LLC (IEC)) focused on investigation and characterization of impacts to the Subject Property.

Prior to implementing remediation/mitigation activities, several meetings with the Pennsylvania Department of Environmental Protection (PADEP) (both at the Subject Property and at the PADEP Southcentral Regional Offices) were conducted. A Work Plan was prepared and submitted to the PADEP on January 31, 2019 for review and approval.

The Subject Property is a 1.44-acre tract of land zoned as commercial located at 2331 East Market Street in Springettsbury Township, York County, Pennsylvania, and is situated north of East Market Street, east of North Royal Avenue, south of Kent Road, and west of Memory Lane. Commercial properties are present to the north, south, and east of the Subject Property, and residential properties are present to the west. The Subject Property is occupied by an approximately 10,705-square foot structure (Plaza Building). The southern portion of the Plaza building is improved by a concrete slab-on-grade flooring and a 1,000-square foot second story. The northern portion of the Plaza building is underlain by a partially exposed basement with concrete slab flooring, and a concrete loading dock servicing the ground floor along the western side. The basement concrete flooring is comprised of three separate slabs at different elevations. The eastern and western basement floor concrete slabs are approximately three feet lower than the central portion of the floor.

Historical dry-cleaning operations, have resulted in impacts to the underlying soil and groundwater media. It is reported that these operations have been discontinued since 1976.

The soil source area in the asphalt paved parking lot adjacent to the west of the loading dock measures approximately 40 feet long by 20 feet wide, extending from approximately 2 feet bgs to 13 feet bgs

(approximately 325 cubic yards). Additional source material is likely present both beneath the Plaza Building as well as on the property adjacent to the southwest wall and will need to be evaluated to a level appropriate for the remedial standard selected for the soil media.

Vapor intrusion from the COC concentrations in soil and groundwater identified on the Subject Property represents a complete exposure pathway that poses an unacceptable risk to human health.

Bioremediation of the impacted source was achieved via the application of the commercially available products AgroRemed® and VapoRemed®. Both these products contain a consortium of aerobic bacteria. The application of these products appears to have positively influenced the degradation of the COC concentrations in soil and also helped reduce risk of exposure via the vapor intrusion pathway. This process is identified as "Enhanced Aerobic Bioremediation" as compared to the process of "Enhanced Anaerobic Bioremediation". The bacteria are aerobic and the medium also supported aerobic conditions.

1.1 User Reliance

This report has been prepared on behalf of 2331 East Market Street, LLC, for submission to the Pennsylvania Department of Environmental Protection (PADEP). No additional parties may use the information contained in this report without obtaining the written permission of WCG and 2331 East Market Street, LLC. WCG' duties and obligations extend only to 2331 East Market Street, LLC. WCG' duties and obligations to such parties are not transferable to any person, corporation, or organization without the express written consent of WCG and 2331 East Market Street, LLC.

2 SITE DESCRIPTION

2.1 Physical Description

The Subject Property is located at 2331 East Market Street in Springettsbury Township, York County, Pennsylvania (**Attachment A – Site Location Map**). The Subject Property is located north of East Market Street, east of North Royal Avenue, south of Kent Road, and west of Memory Lane. The Subject Property (York County Parcel ID #460000200270000000) is zoned as Commercial – Retail – Multiple Occupancy. The Subject Property consists of approximately 1.44 acres of land with approximately 165 feet of frontage along East Market Street and driveway access off Memory Lane and North Royal Street.

The Subject Property is currently improved by an approximately 10,705-square foot structure (Plaza Building) surrounded by asphalt paved parking lots, two small areas islands of maintained grass lawn along East Market Street, and an approximately 1,900 square foot concrete pad that appears to be the foundation of a demolished structure in the northwestern corner (demolished structure). The northern portion of the Plaza building is underlain by a partially exposed basement with concrete slab flooring, and a concrete loading dock servicing the ground floor along the western side (loading dock). An approximately 80-foot long, 3-foot-tall retaining wall constructed of railroad ties is present along the western side of the Plaza Building (retaining wall) (**Attachment B – Site Building Floor Plans**).

The Plaza Building was constructed with concrete flooring, concrete masonry unit (CMU) block walls, CMU block and wooden frame interior walls, and flat ethylene propylene diene monomer (EPDM) roofing. The southern portion of the Plaza building has concrete slab-on-grade flooring and a 1,000-square foot second story. The northern portion of the Plaza building is underlain by a partially exposed basement with concrete slab flooring and a concrete loading dock servicing the ground floor along the western side. The basement concrete flooring is comprised of three separate slabs at different elevations. The eastern and western basement concrete slabs are approximately three feet lower than the central concrete slab.

The Plaza building is serviced by public water and sanitary sewer with laterals off East Market Street (southern boundary). A mechanical room is located in the southeastern corner of the western concrete slab, which is adjacent to the central concrete slab. A sewer sump that services the entire Plaza building is located in the mechanical room. Four restrooms are serviced by the sump including two restrooms on the ground floor in the southern portion of the Plaza building, and two restrooms on the basement floor of the northern portion of the Plaza building.

A sub-slab depressurization (SSDS) system is located in the Plaza building mechanical room. The SSDS system was installed with two sub-slab penetrations, one vertical penetration through the concrete floor in the mechanical room that draws from beneath the western basement slab and one horizontal

penetration through the concrete block wall in the mechanical room that draws from beneath the central basement slab. The SSDS is powered by one RadonAway XP 151 electric fan that operates at approximately 0.7 inches of water column (WC), which equates to approximately 100 cubic feet per minute (CFM). The SSDS system is vented through a combination of PVC/ductile iron piping to the roof top along the northern exterior wall of the Plaza building.

The Subject Property is surrounded by commercial properties and East Market Street followed by additional commercial properties to the south, commercial and residential properties followed by Kent Road and additional commercial and residential properties to the north, commercial properties and Memory Lane followed by commercial properties to the east, and residential and commercial properties and North Royal Street followed by additional residential properties to the west.

2.2 Historical Site Use

According to the information contained in previous reports and historical documents reviewed in preparation of this RIR, the Subject Property was developed with the current Plaza building in 1956 and was operated with multiple tenants including a dry-cleaning facility. A dry-cleaning operation occupied a portion of the Plaza building from 1956 until approximately 1995. According to information presented in the Vapor Intrusion Assessment/Mitigation Work Plan, the current property owner (Ms. Barbara Elliot) reported that no dry-cleaning operations have taken place in the Plaza building since at least 1976. Copies of the previous reports reviewed in preparation of this report are included as **Attachment C**.

2.3 Current Site Use

As of June 30, 2020, the Plaza building was occupied by several commercial businesses as follows;

- Be Balanced Hormone Weight Loss Center;The Top-Drawer clothing store;
- Augusta Jewelers and Coins;
- Replacement Windows of Central PA;
- Virtual October, and;
- WIS International.

3 SITE CHARACTERIZATION AND INTERIM REMEDIAL MEASURES

3.1 Groundwater Investigations

A total of twelve monitoring wells (designated ARM-1 through ARM-9, and GTA-10 through GTA-12) were installed at the Subject Property between 2011 and 2014. Samples were collected from a combination of these wells during thirteen events conducted between October 2011 and April 2016. In general, groundwater at the Subject Property was determined to be approximately 10 feet below ground surface (bgs) and flow toward the north-northwest at a relatively low gradient. Laboratory analysis has revealed that the underlying groundwater has been impacted by dry cleaning solvents at concentrations in excess of applicable medium specific concentrations (MSCs) with an apparent source area on the western side of the Plaza building adjacent to the loading dock. Based on dry cleaning solvent concentrations identified in ARM-7, there is a suspected secondary source in the vicinity of the demolished structure or some type of sub-surface preferential pathway/structural control that resulted in contaminant migration from the primary source area perpendicular to mapped groundwater flow (**Attachment C – Previous Reports**).

It is WCG's understanding that the owner of the Subject Property has hired an independent contractor to complete investigative tasks including the installation of additional monitoring wells and the collection and analysis of samples from the existing monitoring well network is being conducted by others as part of fully characterizing impacts to groundwater.

3.2 Soil Investigations

3.2.1 Previous Investigative Activities

3.2.1.1 August 2011 – Characterization

In August of 2011, SSM Group, Inc. (SSM) oversaw the installation of sixteen (16) soil borings designated SB-1 through SB-16 around the exterior portions of the Plaza building. These borings encountered equipment refusal expected to represent the depth to bedrock between two and eighteen feet bgs. Soils containing significant photoionization detector (PID) response were documented in five of the borings located along the northern and western sides of the Plaza building. Ten soil samples collected from the borings installed along the northern and western sides of the Plaza building were selected and laboratory analyzed for volatile organic compounds (VOCs) associated with dry cleaning solvents via Environmental Protection Agency (EPA) Method 8260B (including 1,1,1-trichloroethane, 1,1-dichloroethene (DCE), 2-butanone, chloromethane, cis-1,2-DCE, tetrachloroethene (PCE), trans-1,2-DCE, trichloroethene (TCE), and vinyl chloride (VC)). Detectable concentrations of the analyzed dry-cleaning solvent related VOCs (target compounds) were identified in three of the borings (SB-5, SB-12, and SB-13) with an apparent source area on the western side of the Plaza building (i.e., SB-12 and SB-13). A copy of the SSM report is

included as an attachment to the Independence Environmental Consulting, LLC (IEC) Combined Remedial Investigation/Final Report included in Attachment C. Historical analytical data summary tables are attached as **Attachment D**.

3.2.1.2 December 2016 – Additional Characterization

In December 2016, following receipt of a disapproval letter from the PADEP for a Combined Remedial Investigation Report and Final Report, IEC oversaw the installation of twenty soil borings (designated SB-17 through SB-36) in the apparent source area on the western side of the Plaza building, except for SB-17, which was installed through the concrete slab in the northwestern corner of the Plaza building basement. No subsurface logs for SB-17 through SB-36 were provided to or obtained by WCG in preparation of this RIR. Twenty-six samples were selected from SB-17 through SB-36, and laboratory analyzed for the target compounds. Twelve of the twenty-two samples contained elevated target compound concentrations. The samples that contained elevated target compounds were collected from nine of the borings, eight borings (SB-21, SB-22, SB-23, SB-24, SB-26, SB-27, SB-33, and SB-34) located in the paved parking lot west of the loading dock along the northern side of the retaining wall /property boundary, and SB-17 located in the northwestern corner of the Plaza building basement. The elevated target compound concentrations were identified at depths varying from 2.0 feet bgs to 10.0 feet bgs. Data summary tables are included in **Attachment D**.

3.2.2 Current Investigative Activities

3.2.2.1 June 2017

Following completion of subsurface injection of AgroRemed® described in Section 3.4 of this report, Environmental Products & Services of Vermont, Inc. (EPSVT) completed the installation of eight soil borings (designated SB-121, SB-122, SB-123, SB-124, SB-126, SB-127, SB-133, and SB-134). These eight soil borings were installed on June 28, 2021 through the use of direct push drilling technologies. These boring were installed to obtain subsurface lithology/condition data, current target compound concentrations from the locations of the borings installed/sampled by IEC that contained elevated contaminant levels in 2016 and evaluating the efficacy of the enhanced aerobic bioremediation efforts implemented by 2331 East Market Street LLC. The SB-17 location was not addressed. The eight borings were extended to depths from 4 feet bgs to 12 feet bgs, at which point equipment refusal was encountered.

Borings SB-121, SB-122, and SB-123 contained positive PID readings ranging from 0.7 parts per million up (ppm) to 80.9 ppm. SB-124 contained positive PID readings ranging from 0.6 parts ppm to 4.0 ppm. SB-126, SB-127, SB-133, and SB-134 contained positive PID readings ranging from 0.3 ppm to 2.3 ppm. Ten samples were selected from the eight borings, submitted to Pace, and laboratory analyzed for the target

compounds. The ten samples were collected from the depths that were documented to contain elevated target compound concentrations during the 2016 sampling event, which corresponded with the depth intervals containing the highest PID readings documented during field screening completed by EPSVT.

The results of the laboratory analysis revealed that, in general, target compound concentrations increased in the locations of SB-121, SB-122, SB-123, and SB-124 and decreased in the locations of SB-126, SB-127, SB-133, and SB-134. It should be noted that there was a significant increase in the PCE concentrations at the location of SB-21/121 at a depth of 3.0 feet bgs. PCE was detected in SB-21 and SB-121 at a depth of 3 feet bgs at concentrations of 1.49 milligrams per kilogram (mg/kg) and 2,680 mg/kg, respectively. Data summary tables included in **Attachment D**.

The June 2017 data revealed that the concentrations in the apparent source area increased, and the aerial extent of the source area decreased. Based on this data, it was suspected that a continuing source of contamination remained in the vicinity of SB-21/121, and that the subsurface injection of AgroRemed® facilitated contaminant biodegradation.

3.2.2.2 July 2017

On September 11, 2017, following the addition of AgroRemed® via the three permanent shallow subsurface application points described in Section 3.4 of this report, EPSVT completed the installation of four soils boring (designated SB-221A, SB-221B, SB-222A, and SB-223A). The “A” borings were installed directly adjacent to the north of the SB-21/121, SB-22/122, and SB-23/123 locations, and the “B” boring was installed directly adjacent to the south of the SB-21/121 location. The four borings were extended to depths from 3 feet bgs to 10 feet bgs, at which point equipment refusal was encountered.

Borings SB-221A, SB-221B, SB-222A, and SB-223A contained positive PID readings ranging from 12.0 ppm to 471 ppm. Nine samples were selected from the four borings, submitted to Pace, and laboratory analyzed for the target compounds. The samples were collected from incremental depths of 3 feet bgs, 5 feet bgs, 7 feet bgs, and 10 feet bgs as were allowed by the terminal depth of each boring.

The results of the laboratory analysis revealed that all four borings contained elevated target compound concentrations. SB-221B at three feet bgs contained PCE at a concentration of 44,200 mg/kg, which is two to five orders of magnitude higher than all the other elevated target compound concentrations detected across the Subject Property with the exception of the PCE concentration detected in EPS-337 at a depth of 5 feet bgs, which is detailed below. Data summary tables are included in **Attachment D**. This data further supports the presence of a continuing contaminant source in the vicinity of SB-21/121/221 (e.g., adjacent to the loading dock on the western side of the building along the retaining wall).

3.2.2.3 November 2017

On November 22, 2017, following the continued addition of AgroRemed® via the three permanent shallow subsurface application points, EPSVT completed the installation of four soils boring (designated EPS-336 through EPS-339). EPS-336 through EPS-339 were installed along the western exterior wall of the Plaza Building east of the loading dock. The four borings were extended to depths from 12 feet bgs to 15 feet bgs, at which point equipment refusal was encountered.

Positive PID readings ranging from 2.6 ppm in EPS-338 to 9,999+ ppm in EPS-337. Six samples were selected from the four borings, submitted to Pace, and laboratory analyzed for the target compounds. The samples were collected from depths varying from 5.0 feet bgs to 15.0 feet bgs.

The results of the laboratory analysis revealed that all four borings contained elevated target compound concentrations. EPS-337 at five feet bgs contained PCE at a concentration of 12,100 mg/kg, which is two to five orders of magnitude higher than all the other elevated target compound concentrations detected across the Subject Property with the exception of the PCE concentration detected in SB-221B at a depth of 3 feet bgs, which is detailed above. Data summary tables are included in **Attachment D**. The ground surface at EPS-337 is located approximately 2 feet higher in elevation than at SB-221B; therefore, the strongest source material appears to be within the same subsurface layer. This data further supports the presence of a continuing contaminant source in the vicinity of the loading dock on the western side of the Plaza Building.

3.3 Interim Remedial Measures – Enhanced Aerobic Bioremediation – June 2017 through March 2020

3.3.1 Injection of AgroRemed®

On June 6, 2017, EPSVT mobilized a track-mounted direct-push drill rig to the Subject Property to complete in-situ treatment of the source area identified based on the data generated in December 2016. The in-situ treatment included the injection of AgroRemed® under pressure into the subsurface soils. The application of AgroRemed® was performed under the direction of the product manufacturer. Seven injection locations were selected to provide aerial coverage of the source area. The injection locations were placed in an “L” shape and spaced assuming a 10-foot diameter zone of influence (**Attachment E – Sample Location Mapping**). The AgroRemed® was injected at depths of 2 feet bgs, 5-feet bgs, and 10-feet bgs in each location through 1.25-inch rods utilizing a combination of a Geoprobe® GP300 Inject Machine and Pressure Activated Injection Probe at a rate of approximately 1.2 gallons at each depth interval (totaling 25 gallons).

3.3.2 Shallow Subsurface Application of AgroRemed®

On July 28, 2017, EPSVT completed the installation of three shallow in-situ treatment application points via 3-inch hand auger. The three points (designated SB-1, SB-2, and SB-3) were installed at the SB-21/121, SB-22/122, and SB-23/123 locations to a depth of 3 feet bgs. The points were constructed of 2-inch PVC materials with 0.010-slot screen from 2 feet bgs to 3 feet bgs, solid riser from 0.5 feet bgs to 2 feet bgs, filtration sand in the borehole annulus from 1.5 foot bgs to 3 feet bgs, and a bentonite seal from 0.5 feet bgs to 1.5 feet bgs. Each point was protected with a flush mount drive-over cover set in a concrete pad.

Eleven additional shallow in-situ treatment applications points were installed. These eleven points were installed throughout the previously identified source area (e.g., in the paved parking lot north of the retaining wall, west of the Plaza building, and along the western exterior wall of the Plaza building east of the retaining wall.

AgroRemed® was gravity fed in the shallow subsurface points at a recommended rate between 0.25 gallons and 2 gallons per point during each application event.

3.3.3 Sub-Slab/Shallow Subsurface Application of VapoRemed®

On February 1, 2018, EPSVT completed the installation of two sub-slab vapor application/monitoring points (designated EPS-1 and EPS-2) in the southwestern corners of the two basement rooms adjacent to the west of the mechanical room. The application/monitoring points were installed with a hammer drill as 3/8-inch diameter penetrations through the concrete slab into the underlying aggregate. Immediately following installation, the points were clean using a wire brush, and debris was removed with a vacuum.

Three sub-slab application points (designated VP-3A, VP-3B, and VP-3C) were installed through the concrete flooring in the maintenance room surrounding the VP-3 location.

VapoRemed® was manually introduced in these five sub-slab applications points at a rate that varied between 0.25 gallons and 2 gallons per point as recommended by the manufacturer.

3.3.4 Sub Slab Depressurization System Upgrade

On July 2, 2019, EPSVT replaced the existing Radon Away® XP151C fan (151) that powered the sub slab depressurization system (SSDS) detailed in Section 2.1 of this report with a Radon Away® RP265 fan (265) that was recommended by the manufacturer. The 265 is a 139-watt fan with a maximum operating pressure of 2.3 inches of water column ("WC), which is an upgrade from the 151, a 70-watt fan with a maximum operating pressure of 1.4 "WC. Utilizing the existing Radon Away® Easy Read Manometer located on the 3-inch polyvinyl chloride (PVC) piping on the suction side of the fan, the operating pressure for the SSDS was documented to have increased from 0.65 "WC to 0.85 "WC.

4 NATURE AND EXTENT OF CONTAMINATION

Based on review of reports documenting soil, groundwater, and soil gas samples collected during previous investigative activities completed prior to June 2017 and results of laboratory analysis performed on soil, soil gas, and indoor air samples collected as part of the current investigative activities conducted between June 2017 and June 2020, compounds detected in soil, groundwater, soil gas, and indoor air include TCE, PCE, 1,1,1-trichloroethane, 1,1- DCE, cis-1,2 DCE, trans-1,2 DCE, carbon disulfide, MEK, methylene chloride, dichlorodifluoromethane, and VC. Other contaminant compounds detected include acetone, benzene, ethylbenzene, 4-ethyltoluene, hexane, isoctane, n-Hexane, toluene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB. The identified constituents of concern (COCs), which have been detected at concentrations exceeding applicable regulatory values, include PCE, TCE, cis-1,2-DCE, 1,1-DCE, and VC. Summaries for analysis performed on groundwater, soil, soil gas, and indoor air samples are provided in **Tables 1, 2, 3, and 4**, respectively (**Attachment D**).

4.1 Extent of Soil Contamination

The current investigation was conducted as part of the approved Work Plan implemented by 2331 East Market Street, LLC. It has revealed an apparent source area in the asphalt paved parking lot adjacent to the loading dock and along the western exterior wall of the Plaza building and the retaining wall (which both represent portions of the Subject Property boundary). Although no characterization has been carried out on neighboring parcels, it appears likely that source material extends into the property adjacent to the southeast. The soil source area in the asphalt paved parking lot adjacent to the west of the loading dock measures approximately 40 feet long by 20 feet wide, extending from approximately 2 feet bgs to 13 feet bgs (approximately 325 cubic yards). Additional source material is likely to be present beneath the Plaza Building as well as on the property adjacent to the southwest and will need to be evaluated to a level appropriate for the remedial standard selected for the soil media.

The highest concentrations of PCE being those borings located in the area west of the loading dock with concentrations as high as 44,200 milligrams per kilogram (mg/kg) at SB-221A. The identified COCs for the soil media, which have been detected at concentrations exceeding applicable numeric values, include PCE, TCE, cis-1,2-DCE, 1,1-DCE, and VC.

4.2 Extent of Groundwater Contamination

Current investigative activities completed at the direction of 2331 East Market Street, LLC were limited to remediation and characterization of the soil media and the vapor intrusion pathway and did not address the groundwater media. Investigative and characterization activities completed by others have documented TCE, PCE, cis-1,2-DCE, and VC concentrations in groundwater exceeding applicable Medium

Specific Concentrations (MSCs) in wells ARM-3A, ARM-3B, ARM-3, ARM-5, ARM-7, ARM-8, and ARM-9. The ARM-3 series wells are located on the western exterior of the Site building have contained the highest COC concentrations, which corresponds with the soil media source area.

COC concentrations at ARM-7 showed a slight upward trend across sampling events and recommendations were made for an additional monitoring well to the south of ARM-7 to ensure that the lateral extent of the contamination plume is adequately characterized and delineated. It has been suggested that these upward trends shown at ARM-7 provide evidence of a preferential flow pathway from the source area and/or a secondary source area.

The identified COCs for the groundwater media, which have been detected at concentrations exceeding applicable MSCs, include PCE, TCE, cis-1,2-DCE, and VC.

As stated in Section 3.1 of this report, it is WCG's understanding that continued investigative tasks including the installation of additional monitoring wells and the collection and analysis of samples from the existing monitoring well network is being conducted by others as part of fully characterizing impacts to groundwater.

5 FATE & TRANSPORT ANALYSIS

Characterization to identify the extent of COCs has been completed. A discussion about the fate and transport of the COCs at the Subject Property is presented below. Further characterization of the unsaturated and saturated zones is needed to fully evaluate exposure pathways and develop an appropriate scope for design/implementation of a SSDS for the Plaza Building and any other engineering/institutional controls, such as continued enhanced aerobic bioremediation, required to mitigate unacceptable risks to human health and the environment from the COCs originating from the Subject Property.

5.1 Unsaturated Zone

Transport of COCs within the unsaturated zone is controlled by soil properties and processes that are variable based on factors including depth, layering, and the presence of preferential pathways/structural controls (Turkey, 2008). Based on lithology logged during the installation of borings at the Subject Property the unsaturated zone is comprised of urban land/fill materials (varying amounts of sand/silt/gravel) and clay soils that are residuum of the underlying Conestoga Formation, an Ordovician-aged limestone (IEC, 2015).

COCs leaching from the source area(s) migrate through the unsaturated zone via advective, diffusive, and dispersive flow into the underlying saturated zone and/or onto the bedrock surface. The rate of migration is expected to be higher within the urban land/fill materials than the clay soils, is facilitated/influenced by any preferential pathways, and impeded/directed by structural controls. Preferential pathways expected to be impacting COC migration within the unsaturated zone include porous materials along the building foundation walls and underlying the basement concrete slabs. Preferential pathways potentially impacting COC migration within the unsaturated zone include the subsurface utilities servicing/transecting the Subject Property. Laterals for the utilities servicing the building including sanitary sewer, water, and natural gas run along the western side of the Plaza Building originating from East Market Street. Storm sewer piping runs throughout the paved parking lot on the northern and western sides of the Plaza Building. Structural control potentially impacting COC migration include the varied surfaces commonly associated with limestone bedrock and/or any previously unidentified subsurface structure(s).

A fraction of the source will be retained within the unsaturated zone via adsorption. Another fraction of the source will volatilize and migrate up through the unsaturated zone to the surface into the atmosphere or accumulate in sub-slab areas and permeate into the indoor air of the Plaza Building or surrounding structures. COCs dissolved within groundwater can also volatilize into the unsaturated zone and follow

similar transport mechanisms to indoor air. COC concentrations identified in soil gas, sub-slab vapor, and indoor air are discussed in Section 5.4 of this report.

5.2 Saturated Zone

As described in Section 3.1, the depth to groundwater at the Subject Property was determined from previous investigations to be approximately 10 feet bgs as an unconfined water-table aquifer. Groundwater flow was measured by IEC and determined to flow toward the north-northwest at a relatively low gradient. According to WCG's review of the initial site characterization conducted by others, groundwater wells were installed in multiple locations on the Subject Property from 2011 to 2013. ARM installed groundwater wells ARM-1 through ARM-9 in various locations around the north, northwestern, and western portions of the Subject Property. In addition, on November 2014, GTA installed three additional groundwater monitoring wells GTA-10, GTA-11, and GTA-12 on the northwest portion of the Subject Property. Results for groundwater analysis indicate that TCE, PCE, DCE, and VC were observed in levels exceeding applicable MSCs in wells ARM-3A, ARM-3B, ARM-3, ARM-5, ARM-7, ARM-8, and ARM-9 from 2011 to 2013. Laboratory analysis has demonstrated the presence of COC migration parallel to the groundwater flow direction, as well as perpendicular to the groundwater flow direction towards ARM-7.

As stated in Section 3.1 of this report, it is WCG's understanding that continued investigative tasks including the installation of additional monitoring wells and the collection and analysis of samples from the existing monitoring well network is being conducted by others as part of fully characterizing impacts to groundwater. Impacts to groundwater were not addressed as part of the scope of work for the current investigative activities.

5.3 Impacts to Surface Water from Diffuse Flow

Pursuant to information presented in the IEC Combined Remedial Investigation Report & Final Report dated May 4, 2015, the closest surface water to the Subject Property is an unnamed tributary of Mill Creek located approximately 1,100 feet to the north (downgradient). Based on the presence of COC concentrations in excess of applicable MSCs, impacts to surface water via the diffuse flow of groundwater is a potential concern. As stated in Section 3.1 of this report, it is WCG's understanding that continued investigative tasks including the installation of additional monitoring wells and the collection and analysis of samples from the existing monitoring well network is being conducted by others as part of fully characterizing impacts to groundwater.

5.4 Vapor Intrusion

WCG has reviewed laboratory analytical data for? sampling conducted to evaluate the vapor intrusion pathway for soil gas, sub-slab vapor, and indoor air on the Subject Property. The sampling conducted and

results of laboratory analysis are summarized below. Vapor intrusion represents a complete exposure pathway that will have to be addressed via remediation and/or mitigation in order to eliminate unacceptable risks to human health.

5.4.1 Soil Gas

On June 10, 2019, EPSVT installed six soil gas points at the Subject Property (designated SG-101 through SG-106) (**Attachment E –Sample Location Mapping**). SG-101 and SG-106 were installed on the western side of the Plaza building, adjacent to the boundary between the Subject Property and a commercial building in the suspected source area. SG-102 and SG-103 were installed along the western boundary adjacent to several residential buildings. SG-104 and SG-105 were installed along the northern boundary adjacent to commercial properties.

SB-101 through 106 were installed via direct push technology within an approximately 2-inch diameter borehole. SG-101 through SG-106 were installed within approximately 1-foot of the capillary fringe as determined by the static water levels (SWLs) recorded in the well completion logs from February 2012 (Well Logs), or a minimum depth of 5 feet bgs. The construction of each point included a six-inch long 0.25-inch diameter screened steel vapor sampling implant connected to 0.25-inch diameter poly tubing with a hose barb at the ground surface. The annular space of the borehole was filled with filtration sand in the depth intervals of the screened interval of the sampling point (e.g., sand from the bottom of the borehole extended up to approximately 0.5 feet above the implant). The remaining annular space was sealed with a bentonite seal. Each of the locations was finished with a protective flush mount drive-over cover.

The newly installed sampling points were allowed to equilibrate for a minimum of 24 hours before sampling. One round of soil gas samples was collected from each of the six points on June 18, 2019. The samples were collected using laboratory-supplied 1-liter Summa™ canisters for a 30-minute duration with a flow of 200 mL/min or less. Before collection, a shut-in test was performed on the sampling train according to protocols set forth in the Land Recycling Program Technical Guidance Manual for VI into Buildings from Groundwater and Soil under Act 2 (VI Guidance). Once each sampling train passed the shut-in test, purging and sampling was conducted in accordance with protocols outlined in the VI Guidance (including purging a minimum of three sampling train volumes at a rate of less than 200 mL/min and use of a helium shroud as a means of leak detection during purging). Soil gas samples were collected/analyzed via EPA method TO-15.

The results of the laboratory analysis revealed that all six samples contained detectable concentrations of between two and thirteen of the eighteen COCs (**Table 3**). SG-101 and SG-104 contained three (PCE, TCE, and VC) and one (PCE) of the COCs at concentrations exceeding Residential Near Source VI Screening

Values, respectively. SG-106 contained one of the COCs (trans 1,2-DCE) at a concentration exceeding Residential Near Source VI Screening Values and three of the COCs (PCE, TCE, and VC) at concentrations exceeding Residential and Non-Residential Near Source VI Screening Values. Compound concentrations detected in SG-102, SG-103, and SG-105 did not exceed any Near Source VI Screening Values.

Three additional sampling events were collected from SG-101 and SG-106 on December 12 and 26, 2019 and January 30, 2020, following multiple shallow subsurface applications of AgroRemed®/VaporRemed® described in Section 3.3.2 of this report. The protocols and laboratory methodologies described above were utilized during all subsequent soil gas sampling events. The results of the laboratory analyses revealed that SG-101 contained detectable concentrations of several COCs including two of the COCs (TCE and VC) at concentrations above the Residential Near Source VI Screening Values that did not exceed any of the Non-Residential Near Source VI Screening Values. SG-106 also continued to contain detectable concentrations of several COCs including two of the COCs (TCE and VC) at concentrations in excess of the Residential and Non-Residential Near Source VI Screening Values, as well as PCE at concentrations that exceeded Residential and Non-Residential Near Source VI Screening Values on December 12, 2019, and only Residential Near Source VI Screening Values on December 26, 2019 and January 30, 2020. (Please reframe the sentences.)

Throughout the advanced aerobic bioremediation activities, the COC concentrations decreased up to two orders of magnitude with a reduction from the highest detected concentrations between 65 percent and 99 percent. The overall decrease in COC concentrations are presented in the table below:

Target Compounds		cis 1,2-DCE	trans 1,2 DCE	PCE	TCE	VC
Sample ID	Date					
SG-101	6/18/2019	82,700	1,850	29,000	7,280	4,680
	12/12/2019	2,160	43.8	2,870	666	676
	12/26/2019	4,490	114	3,700	911	1,200
	1/30/2020	4,500	122	2,340	680	1,620
SG-106	6/18/2019	848,000	22,300	1,570,000	332,000	681,000
	12/12/2019	166,000	5,940	80,400	636,000	122,000
	12/26/2019	302,000	2,410	30,700	70,400	66,300
	1/30/2020	248,000	749	10,700	3,160	222,000
Notes:						
ND = Not detected at or above the laboratory reporting limit (reporting limit indicated in parentheses).						
Units are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)						

5.4.2 Sub Slab Vapor

Between January 29, 2016, and July 2, 2019, fourteen rounds of sub-slab vapor samples were collected from the VP-3, which is an approximately 3/8-inch diameter penetration through the concrete flooring in the maintenance room of the Plaza Building. Sub slab vapor samples were also collected from EPS-1,

which is an approximately 3/8-inch diameter penetration through the concrete flooring in the southwestern corner of the Plaza Building basement, during three of the fourteen rounds (February 2, May 17, and August 28, 2018).

In addition to the samples collected from locations on the Subject Property, a sample was also collected from the sub-slab vapor on the 15 North Royal Street property. The sample location was an approximately 3/8-inch diameter penetration through the concrete flooring in the southwestern portion of the residential apartment building basement that was utilized as a laundry room.

The samples were collected using laboratory supplied 1-liter Summa™ canisters for a 30-minute duration with a flow of 200 mL/min or less. Prior to collection, a shut-in test was performed on the sampling train according to protocols set forth in the VI Guidance. Once each sampling train passed the shut-in test, purging and sampling was conducted in accordance with protocols set forth in the VI Guidance (including purging a minimum of three sampling train volumes at a rate of less than 200 mL/min). Soil gas samples were analyzed for the COCs via EPA method TO-15.

The results of the laboratory analysis revealed that between five and seventeen of the COCs were detected above laboratory detection limits during each of the sampling rounds in both locations (VP-3 and EPS-1). Up to four of the COCs were detected at concentrations exceeding Non-Residential Sub-Slab Soil Gas VI Screening Values during six of the sampling rounds in VP-3. PCE and TCE were detected at VP-3 at concentrations exceeding Non-Residential Sub-Slab Soil Gas VI Screening Values during two consecutive sampling rounds (March 4, 2016, and February 21, 2018). PCE, TCE, cis 1,2-DCE, and VC were detected at VP-3 at concentrations exceeding Non-Residential Sub-Slab Soil Gas VI Screening Values during three consecutive sampling rounds (May 17, 2018, June 21, 2018, and July 25, 2018). TCE, cis 1,2-DCE, and VC were detected at VP-3 at concentrations exceeding Non-Residential Sub-Slab Soil Gas VI Screening Values during the August 28, 2018 sampling round. COC concentrations did not exceed any of the Non-Residential Sub-Slab Soil Gas VI Screening Values during any of the remaining sampling rounds in VP-3, or in any of the samples collected from EPS-1.

The results of the analysis performed on the sample collected from the 15 North Royal Street property revealed that twelve of the COCs were present at concentrations above laboratory reporting limits with PCE and TCE concentrations (125,000 micrograms per cubic meter and 4,230 micrograms per cubic meter exceeding Residential sub-slab vapor screening values.

Throughout the duration of the advanced aerobic bioremediation activities, the COC concentrations decreased up to three orders of magnitude with a reduction from the highest detected concentrations at VP-3 of 99 percent. The overall decrease in COC concentrations are presented in the table below:

Target Compounds		cis 1,2-DCE	trans 1,2-DCE	PCE	TCE	VC
Sample Identification	Date Collected					
VP-3	1/29/2016	510	2.7	510	110	ND (0.5)
	3/4/2016	32,000	240	110,000	7,300	44
	2/21/2018	23,300	175	107,000	7,710	143
	4/6/2018	1,990	16.5	587	326	ND (0.44)
	5/17/2018	92,700	259	103,000	9,750	159
	6/21/2018	434,000	1,880	32,000	15,500	11,300
	7/25/2018	86,900	3,060	55,600	21,900	3,440
	8/28/2018	147,000	362	15,500	11,500	29,100
	5/22/2019	754	ND (11.2)	543	82.2	200
	5/22/2019	4,260	ND (116)	568	212	713
	5/23/2019	3,590	ND (118)	445	203	329
	7/1/2019	2,930	8.4	1,470	155	65.9
	7/1/2019	496	2.6	470	53	30.3
	7/2/2019	6,310	18.1	591	252	198
EPS-1	2/21/2018	350	4.3	876	107	ND (0.46)
	5/17/2018	239	ND (2.4)	412	84.6	ND (0.76)
	8/28/2018	345	6.5	585	833	61.3

Notes:

Units are in micrograms per cubic meter (ug/m³)

5.4.3 Indoor Air

A baseline IAQ evaluation was completed in the Plaza Building on April 4 and 18, 2019 by EPSVT. The baseline IAQ samples were collected from twelve interior locations (designated IA-001 through IA-012) and one exterior location (designated IA-Ambient (On Dock) (**Attachment B, Site Building Floor Plans**)). IA-001 was the only location sampled twice during the baseline IAQ evaluation. Sampling locations were selected based on existing functional spaces, apparent contaminant source area(s), and potential preferential pathways (e.g., bathrooms with sewer lines leading to the sewer sump).

An additional round of IAQ samples were collected from the eight interior locations (IA-001 through IA-008) within the Plaza Building basement, as well as the IA-Ambient (On Dock) location on July 24, 2019. Samples were collected from the IA-001 location during twelve subsequent events between September 4, 2019, and January 30, 2020. Samples were also collected from the IA-002 and IA-003 on September 4, 2019, and IA-007 and IA-008 on January 17, 2020, and IA-002, IA-004, IA-009, IA-010, IA-011, and IA-013 on January 20, 2020.

The samples were collected using laboratory-supplied 6-liter Summa™ canisters for a 8-hour duration with a flow of 200 mL/min or less. The indoor air samples were analyzed for the COCs via EPA method TO-15.

The results of the laboratory analysis performed during the baseline evaluation revealed that twelve of COCs were detected in the indoor air at concentrations above laboratory reporting limits. Two of the COCs (PCE and TCE) were detected at concentrations exceeding the Non-Residential Indoor Air screening values as outlined in Act 2 regulations in seven of the thirteen locations sampled. The elevated PCE and TCE concentrations were only present in the locations within the Plaza Building basement.

The results of the laboratory analysis performed on the samples collected during the subsequent rounds revealed a COCs continued to be detected at concentrations above laboratory reporting limits with PCE and/or TCE exceeding Non-Residential Indoor Air screening values until December 19, 2019. PCE and TCE concentrations dropped below Non-Residential Indoor Air screening values during the last three sampling rounds conducted (December 26, 2019, and January 17 and 20, 2020). Methylene Chloride exceeded its Non-Residential Indoor Air screening value at the IA-013 location (the northeastern corner of the Plaza Building's ground floor) during the January 20, 2020 sampling round.

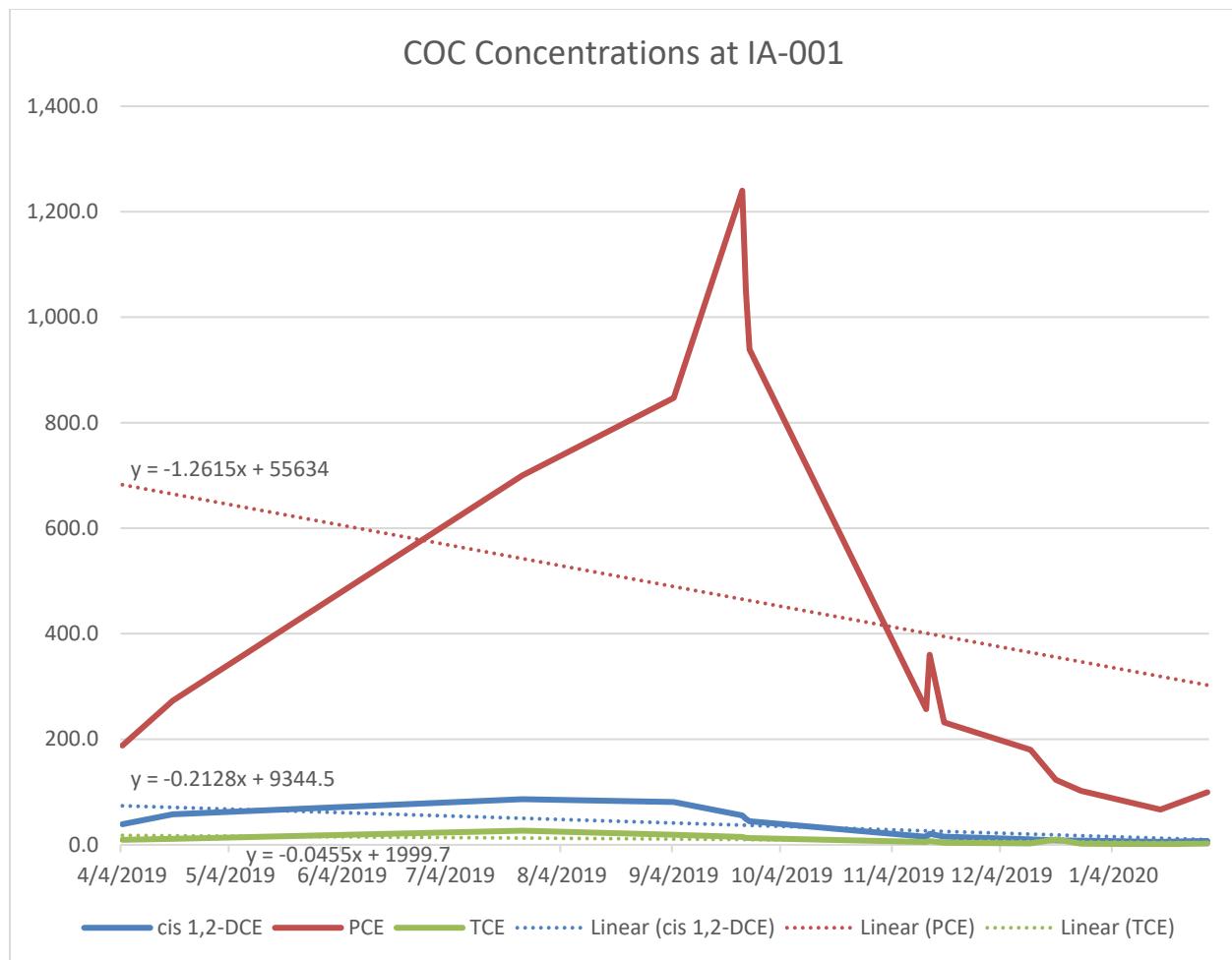
During the advanced aerobic bioremediation activities, the COC concentrations decreased up to two orders of magnitude with a reduction from the highest detected concentrations at IA-001 of 93 percent to 95 percent. The overall decrease in COC concentrations is presented in the table below. The charts below include a trend line for each COC at the IA-001, IA-002, and IA-008 sampling locations. The equation for each COC trendline has a negative slope documenting a decreasing trend in IAQ concentrations throughout advanced aerobic bioremediation activities.

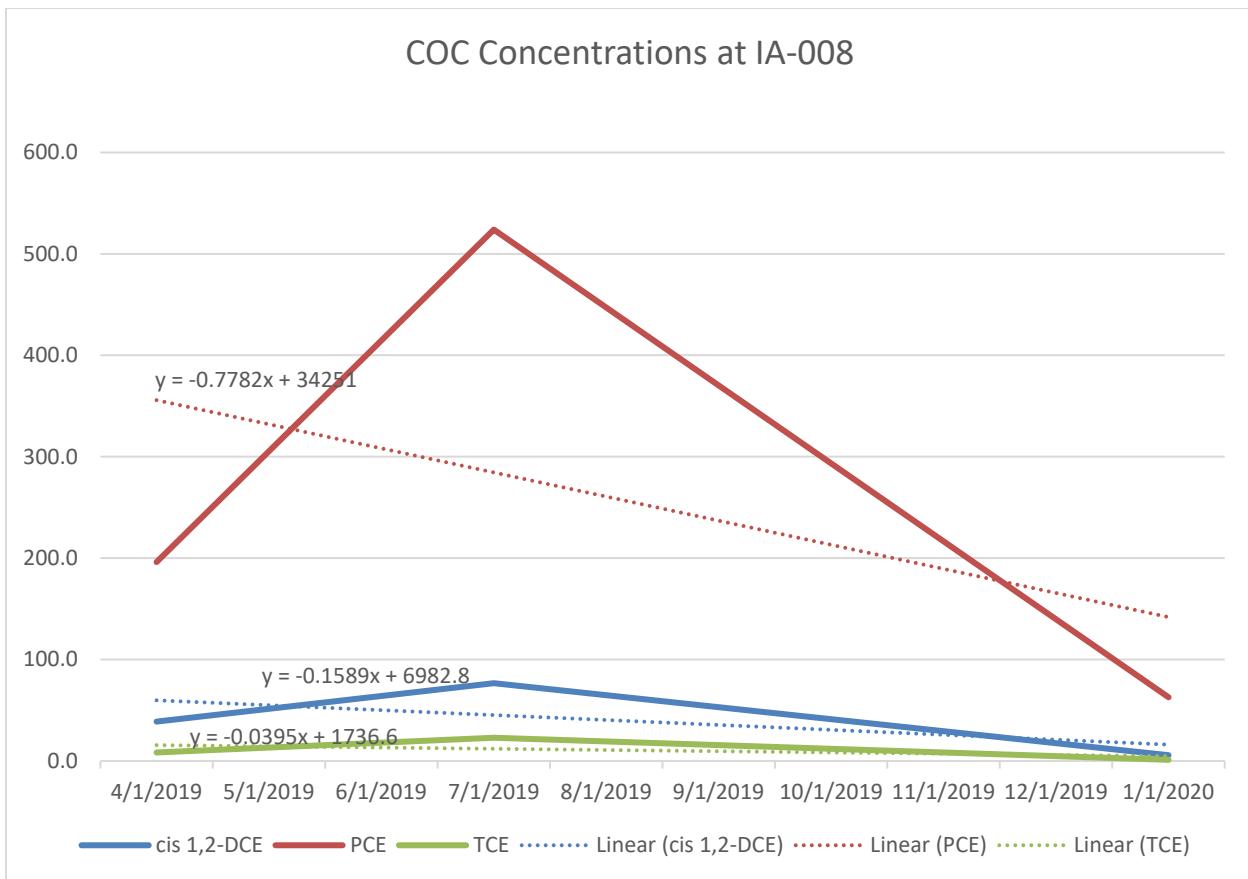
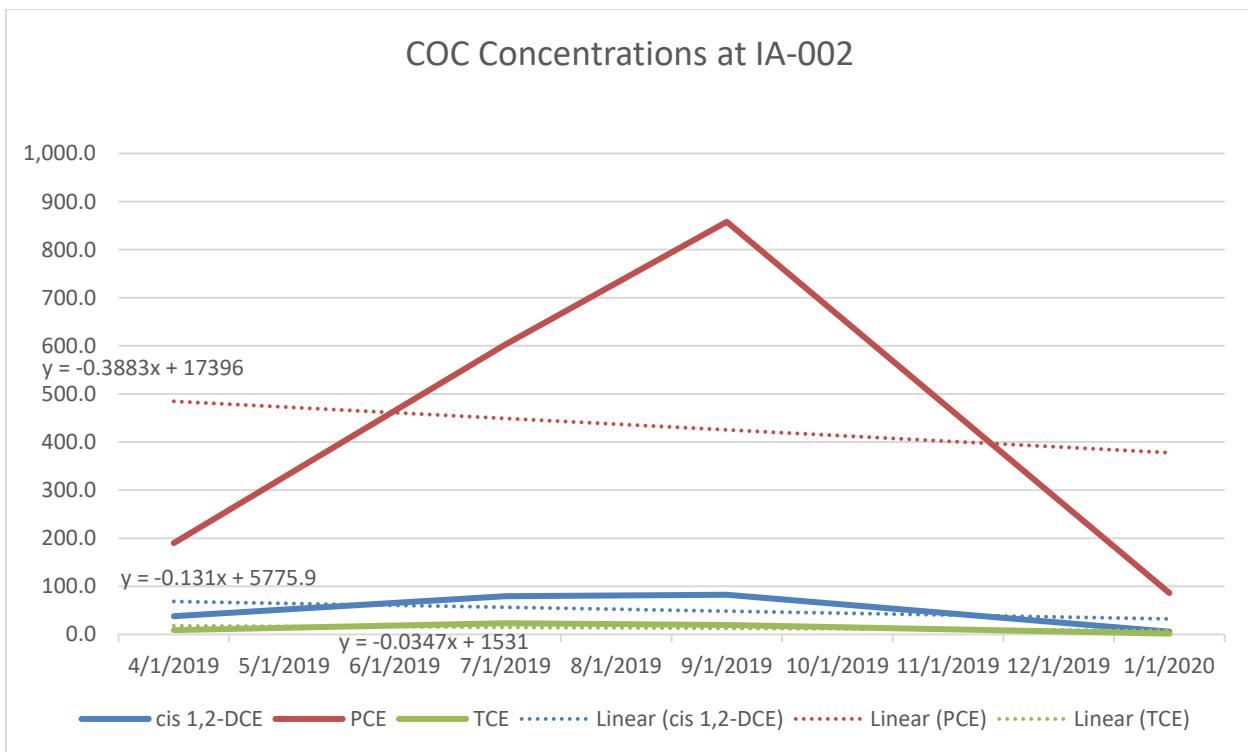
Target Compounds		cis 1,2-DCE	PCE	TCE	VC
Sample Identification	Date				
IA-001	4/4/2019	38.9	188	9.3	0.64
	4/18/2019	57.6	273	11.2	ND (0.37)
	7/24/2019	86.5	700	26.8	ND (.039)
	9/4/2019	81.0	847	19.0	ND (0.42)
	9/23/2019	55.6	1,240	14.8	ND (0.37)
	9/24/2019	49.1	1,050	12.9	ND (0.40)
	9/25/2019	44.4	939	12.5	ND (0.40)
	11/13/2019	15.1	257	5.2	ND (0.39)
	11/14/2019	20.6	360	6.9	ND (0.37)
	11/18/2019	15.3	232	3.6	ND (0.39)
	12/12/2019	10.3	180	2.5	ND (0.40)
	12/19/2019	8.2	123	10.0	ND (0.48)
	12/26/2019	7.9	102	1.8	ND (0.40)
	1/17/2020	5.5	66.7	1.2	ND (0.40)
	1/30/2020	7.1	99.5	2.1	ND (0.44)
IA-002 (G Middle Room)	4/4/2019	38.0	190	9.0	ND (0.37)
	7/24/2019	79.3	603	23.4	ND (0.39)
	9/4/2019	82.7	858	19.5	ND (0.37)
	1/20/2020	5.8	86	1.6	ND (0.41)
IA-008 (WIS)	4/4/2019	38.8	196	8.3	ND (0.37)
	7/24/2019	76.7	524	22.8	ND (0.2)
	1/17/2020	5.7	62.8	1.1	ND (0.40)

Notes:

ND = Not detected at or above the laboratory reporting limit (reporting limit indicated in parentheses).

Units are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)





6 OTHER INFORMATION REQUIRED UNDER THE SITE-SPECIFIC STANDARD

6.1 Public Benefits of Reuse

The public will benefit greatly from the remediation of the Subject Property. Plaza 2331, a multi-tenant commercial building, contains several small businesses and takes advantage of the accessible location off of East Market Street. Attractive and inviting small businesses will increase commerce and the opportunity for public services in the area.

6.2 Ecological Risk Assessment

According to the PADEP's Technical Guidance Manual (TGM), "all sites remediated to the SHS must be screened for impacts to ecological receptors". As such, EPSVT followed the screening process described in Section 250.311 of the regulations and the flow chart in the TGM to complete this process. The following information is provided:

- Step 1: Step 1 of the Ecological Screening Flow Chart (Section 250.311(b)(1)) asks, "Are the only constituents detected onsite associated with light petroleum products, including jet fuel, gasoline, kerosene, fuel oil #2 or diesel fuel?" The contaminant of concern at the Site is TCE, PCE, and DCE. Therefore, the answer to Step 1 is "No".
- Step 2: Step 2 of the Ecological Screening Flow Chart (Section 250.311(b)(2)) asks, "Is the area less than two (2) acres of impacted surface soils or less than 1,000 square feet of impacted sediment?" The impacted surface soil area was not fully characterized, however based on estimates derived from boring locations the potential area of impact is approximately 8,000 square feet (0.1836 acres). Therefore, the answer to Step 2 is "No".
- Step 3: Step 3 of the Ecological Screening Flow Chart (Section 250.311(b)(3)) asks, "Does the site have features, which would obviously eliminate specific exposure pathways?" No obvious features were present within the study area to eliminate exposure pathways. Therefore, the answer to Step 3 is "No".

According to the regulations, if the criteria in Step 1, Step 2 or Step 3 are met, no further ecological action is required. Since the criteria in Steps 1, 2, and 3 have not been met for the Subject Property, further ecological screening action is required.

WCG performed a search for potential impacts to "special concern species or resources" in the area of the Subject Property via the Pennsylvania Natural Diversity Inventory (PNDI) website. The PNDI consults the PA Game Commission, the PA Department of Conservation and Natural Resources (DCNR), the PA Fish and Boat Commission, and the U.S. Fish and Wildlife Service (FWS). The PNDI receipt indicated that no

known impacts existed at the Site. Therefore, no further ecological evaluation is necessary. A copy of the PNDI Project Environmental Review Receipt is provided in **Attachment F – PNDI Search Receipt**.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

WCG has reviewed documentation of soil and groundwater characterization, in-situ remediation, and exposure pathway evaluation for the COC concentrations identified resulting from its historical operation of a dry cleaning facility at the Subject Property and draws the following conclusions.

1. Historical dry cleaning operations, conducted on the Subject Property till 1976, have resulted in impacts to the underlying soil and groundwater media.
2. The soil source area in the asphalt paved parking lot adjacent to the west of the loading dock measures approximately 40 feet long by 20 feet wide, extending from approximately 2 feet bgs to 13 feet bgs (approximately 325 cubic yards). Additional source material is likely to be present beneath the Plaza Building as well as on the property adjacent to the southwest and will need to be evaluated to a level appropriate for the remedial standard selected for the soil media.
3. COC concentrations in groundwater appear to confirm the presence of the source area in the asphalt parking lot adjacent to the west of the loading dock. Groundwater is present at approximately 10 feet bgs and appears to flow generally to the north-northwest. COC concentrations detected in ARM-7 provide evidence of a preferential flow pathway and/or structural control(s) from the source area and/or a secondary source area.
4. Vapor intrusion from the COC concentrations in soil and groundwater identified on the Subject Property represents a complete exposure pathway that poses an unacceptable risk to human health.
5. Enhanced aerobic bioremediation by application of AgroRemed® and VapoRemed® appear to have significantly influenced the degradation of the COC concentrations in soil and helped reduce risk of exposure via the vapor intrusion pathway. Laboratory data collected throughout the enhanced aerobic bioremediation application has shown a 65 percent to 99 percent reduction from the highest detected concentrations in soil gas, sub-slab vapor, and indoor air at various locations.
6. Complete characterization of the soil and groundwater media and evaluation of potential exposure pathways has not been completed at the Subject Property.

7.2 Recommendations

Based on the information presented in the report, WCG presents the following recommendations:

1. Complete characterization activities to fully delineate the vertical and horizontal extent of impacts to the soil and groundwater media. Investigation to identify preferential pathways and/or structural controls affecting the migration of COCs may need to be completed in order to fully characterize impacts.
2. Perform the necessary risk assessment and develop and implement a Cleanup Plan to address all exposure pathways that represent unacceptable risk. Short of redeveloping the Subject Property, the cleanup plan will likely involve some sort of in-situ remediation and/or engineering/institutional controls to eliminate or mitigate unacceptable risks.
3. In-situ remediation could include the continued application of AgroRemed® and/or VapoRemed® as a means to achieve enhanced aerobic bioremediation.
4. Preparation and submittal of the appropriate reports to the PADEP in accordance with Act 2 regulations that demonstrate compliance with applicable remedial standard(s) including any post remedial care plan and/or environmental covenant to ensure all unacceptable risks have been eliminated and/or mitigated.

8 REFERENCES

1. Pennsylvania Code Title 25 Environmental Protection Chapter 250 Administration of Land Recycling Program Remedial Investigation Report (25 Pa. Code § 250.408).
<http://www.pacodeandbulletin.gov/Display/pacode?file=/secure/pacode/data/025/chapter250/s250.408.html&d=reduce>.
2. The Land Recycling Program Technical Guidance Manual (TGM).
<https://www.dep.pa.gov/Business/Land/LandRecycling/Standards-Guidance-Procedures/Guidance-Technical-Tools/Pages/Technical-Guidance-Manual.aspx>.
3. Pennsylvania Natural Diversity Inventory (PNDI) Planning Report.
<https://www.naturalheritage.state.pa.us>.
4. Remediation Report for 2331 East Market Street. Prepared by Environmental Products and Services of Vermont, Inc.
5. Vapor Intrusion Assessment/Mitigation Work Plan. Prepared by Environmental Products and Services of Vermont, Inc. January 31, 2019.
6. Enhanced Aerobic Bio-Remediation of Chlorinated Solvents at a Strip Mall in York, PA. Dinkar Ganti. December 26, 2020.
7. Enhanced Aerobic Bioremediation of Chlorinated Solvents at 2331 E. Market Street, York PA, Dinkar Ganti. March 30, 2020
8. Mitigation of Vapor Intrusion by Chlorinated Solvents Using Bioremediation Products at a Site in York, Pennsylvania: A Case Study.
9. USEPA, Engineered Approaches to In Situ Bioremediation of CHloriated Solvents: Fundamentals and Field Application, <https://clu-in.org/download/remed/engappinsitbio.pdf>, 2000.

9 ATTACHMENTS

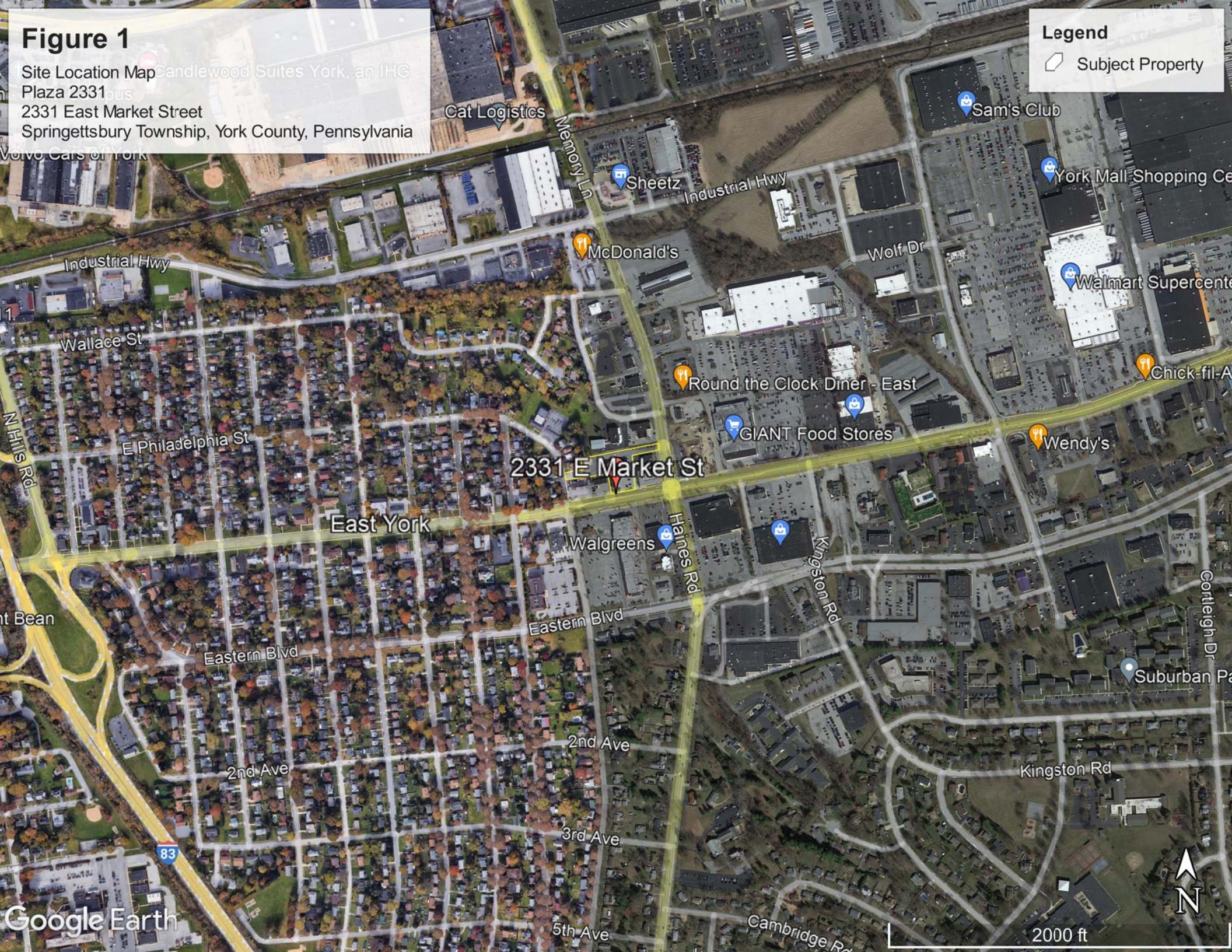
Attachment A

Site Location Map

Figure 1

Site Location Map
Candlewood Suites York, an IHG
Plaza 2331
2331 East Market Street
Springettsbury Township, York County, Pennsylvania

Legend
 Subject Property



Attachment B

Site Building Floor Plans

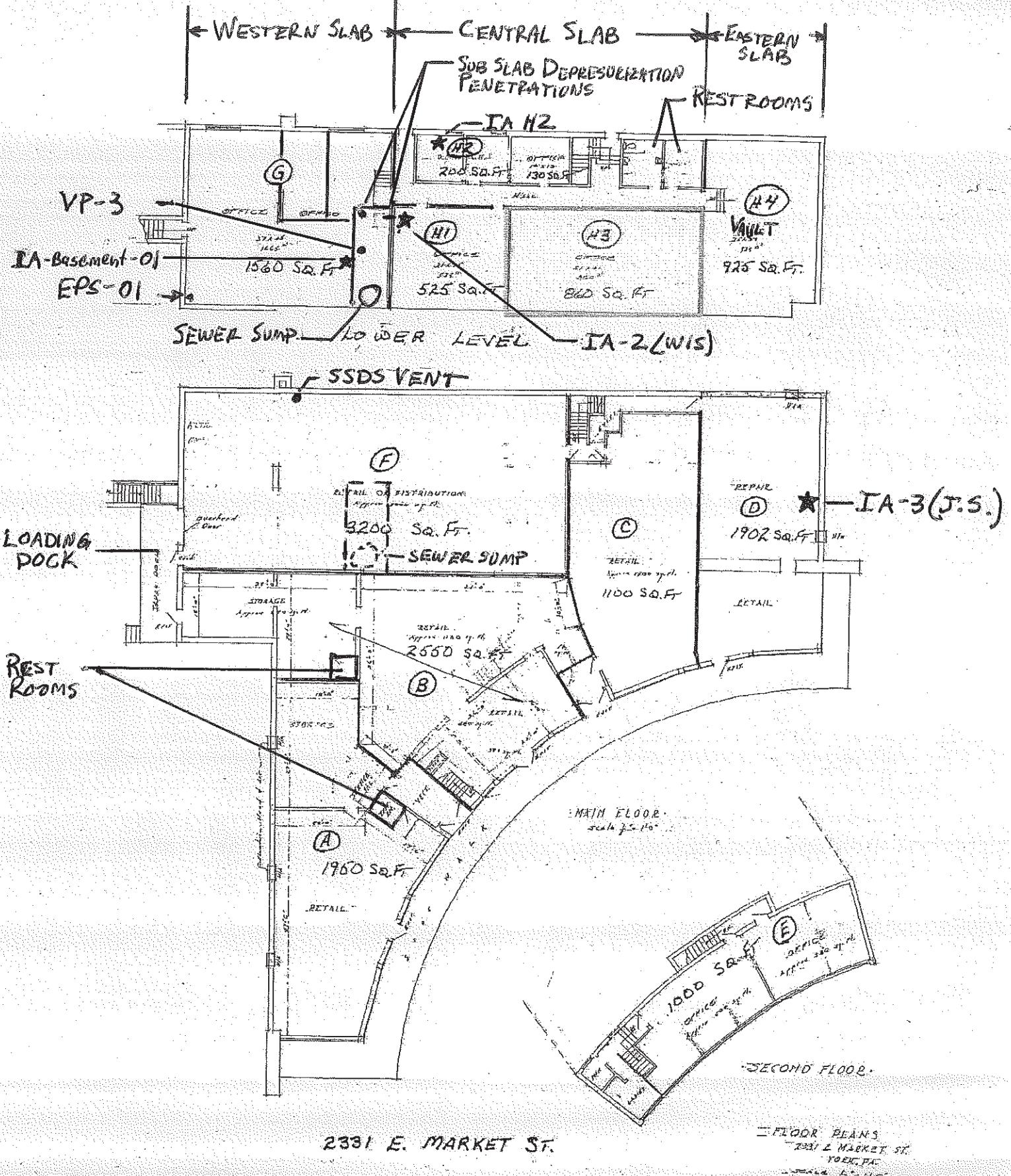
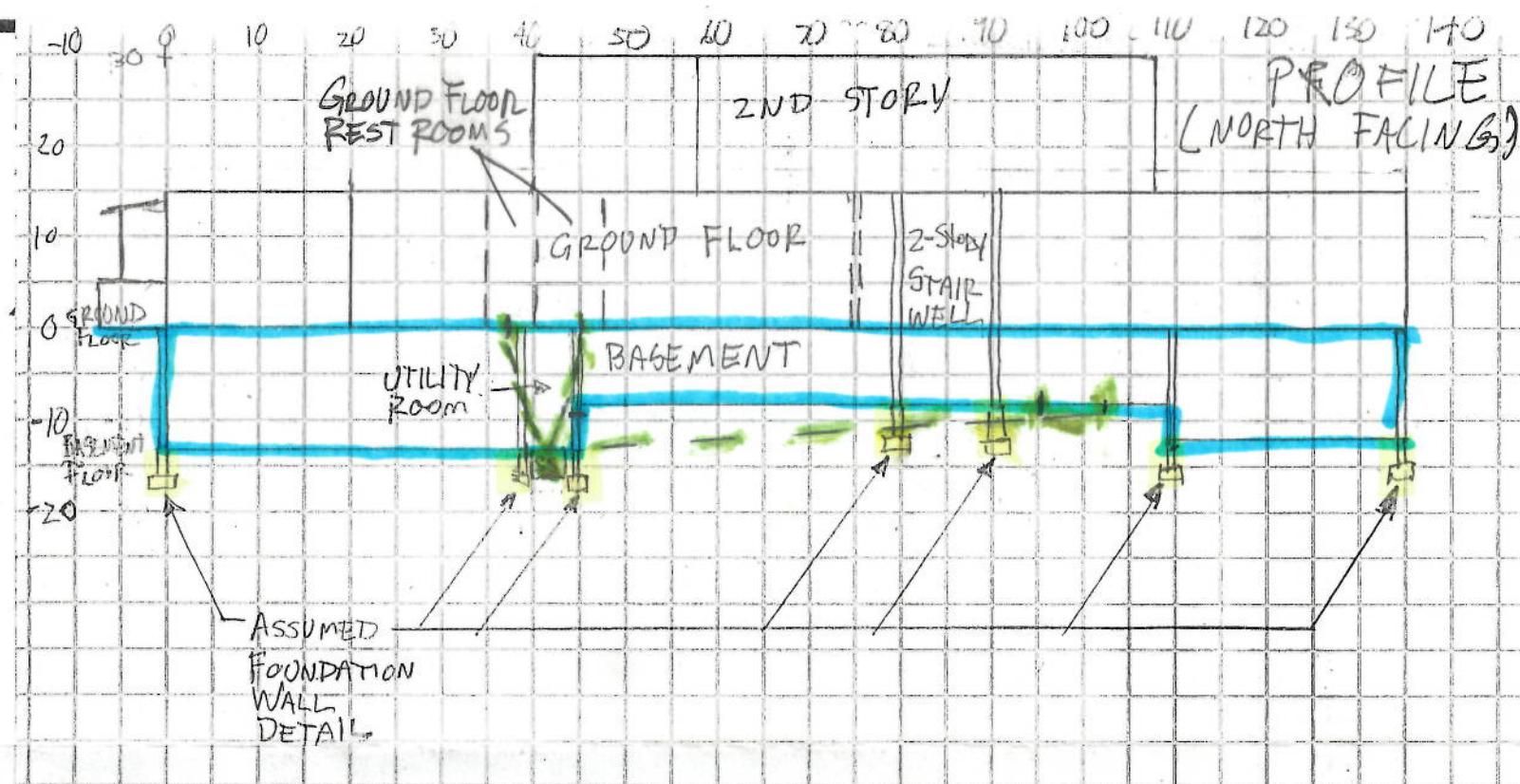
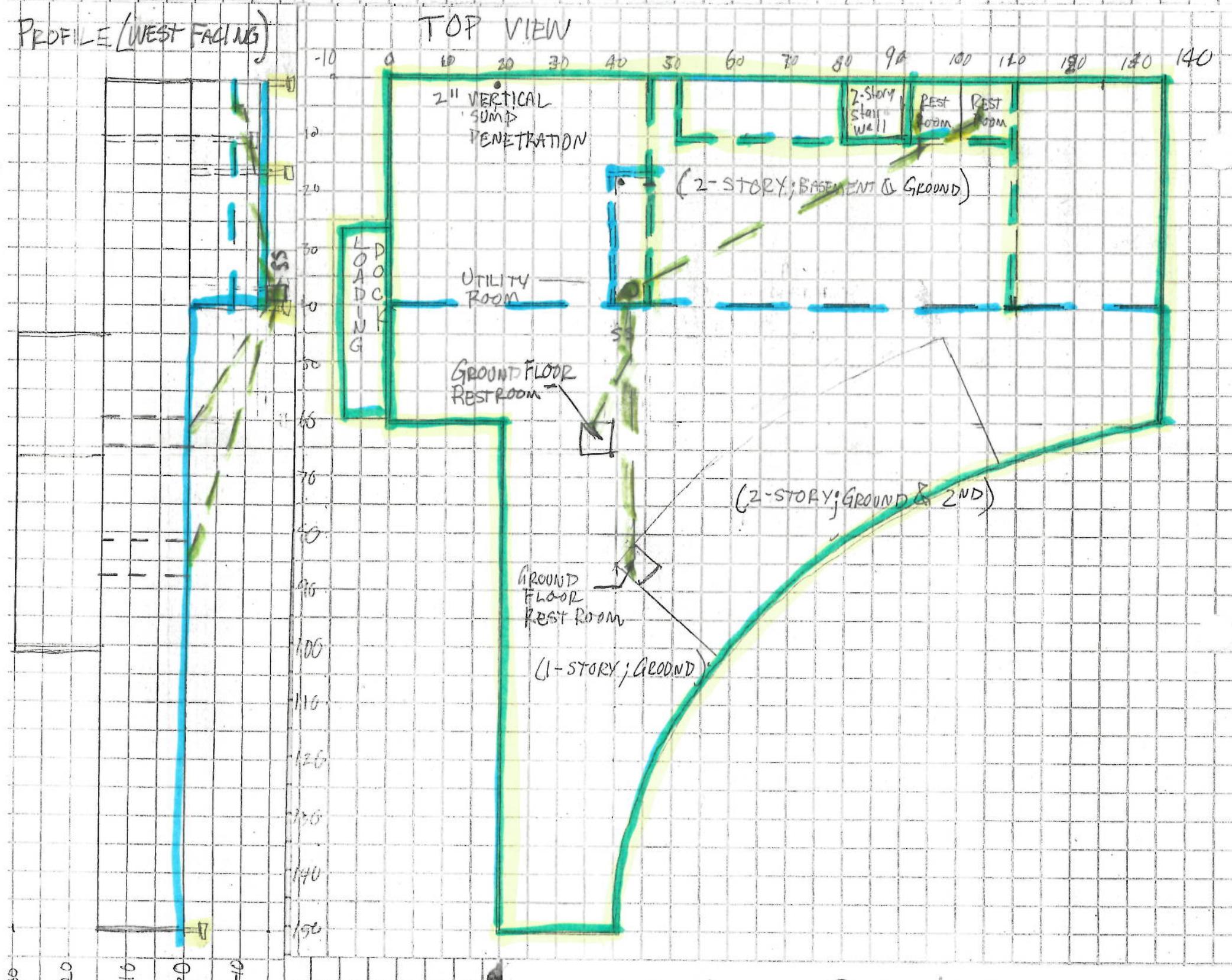


Figure 3 Site Building Layout and Sample Location Plan



PROFILE (WEST FACING)



- = ASSUMED SEWER LINES
- SS = SEWER SUMP
- = CONCRETE BLOCK WALL/FLOOR IN CONTACT WITH SUB SURFACE
- = ASSUMED LOCATIONS WITH FOUNDATION STRUCTURE(S)

SITE PLAN

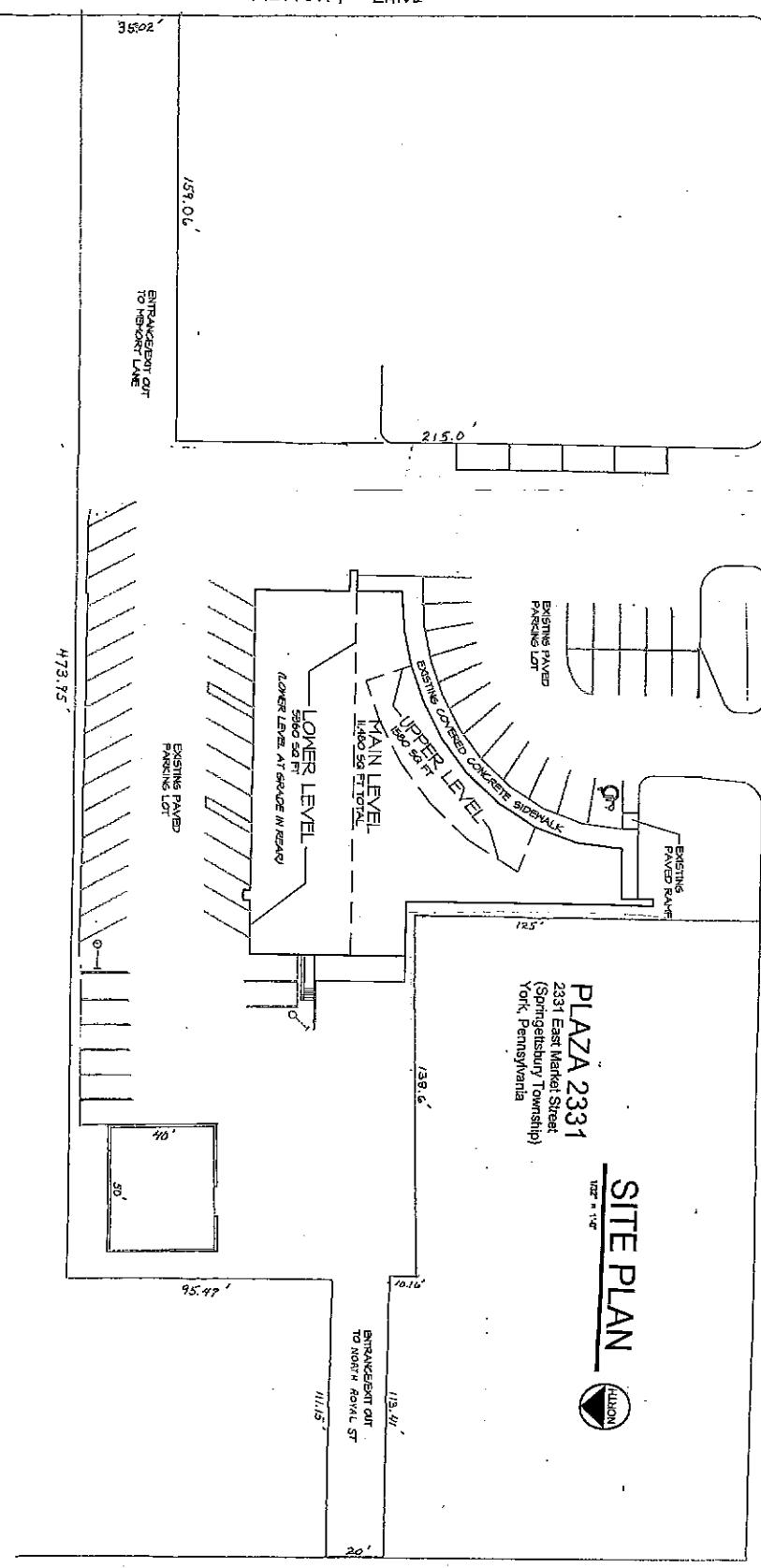


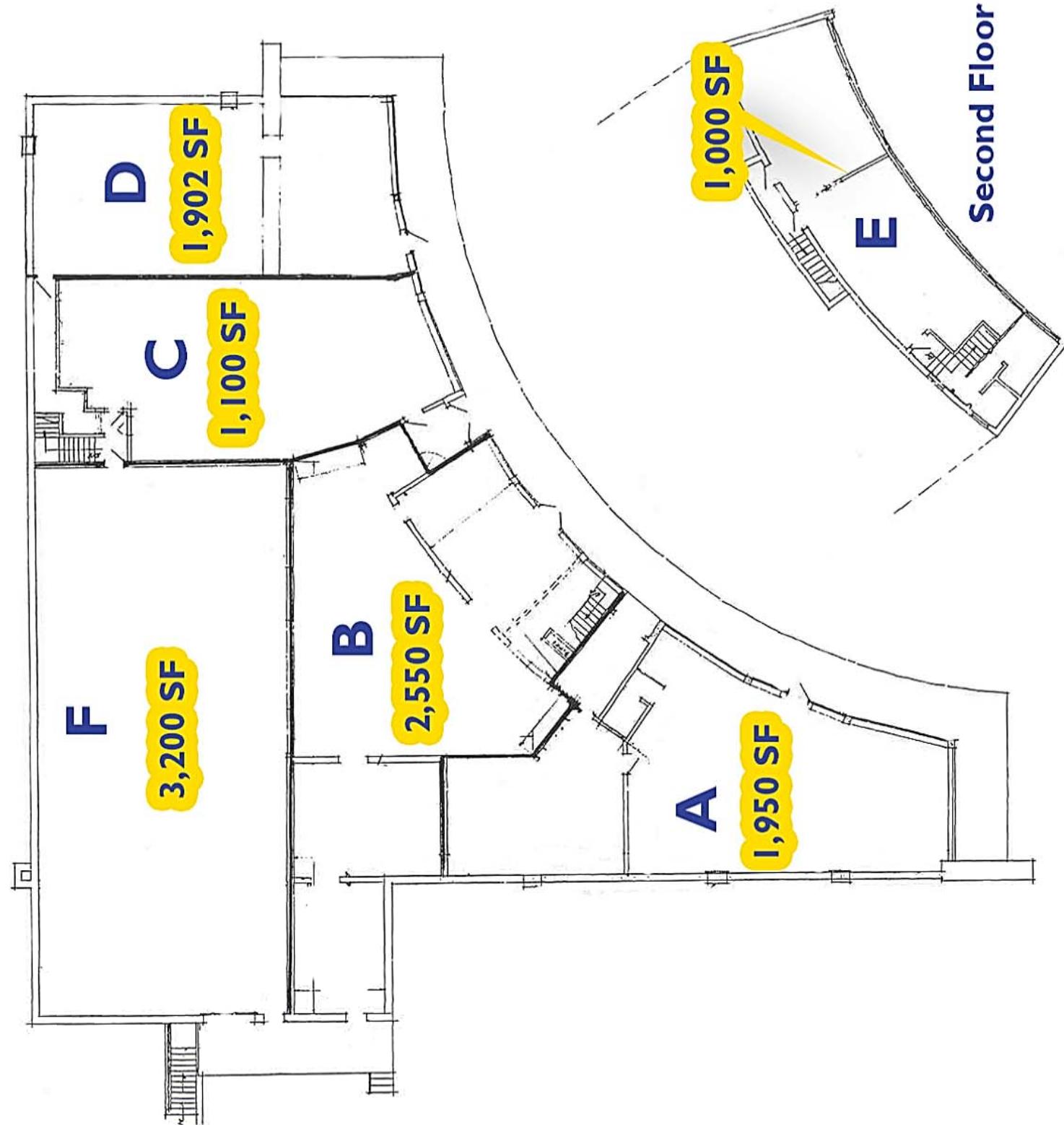
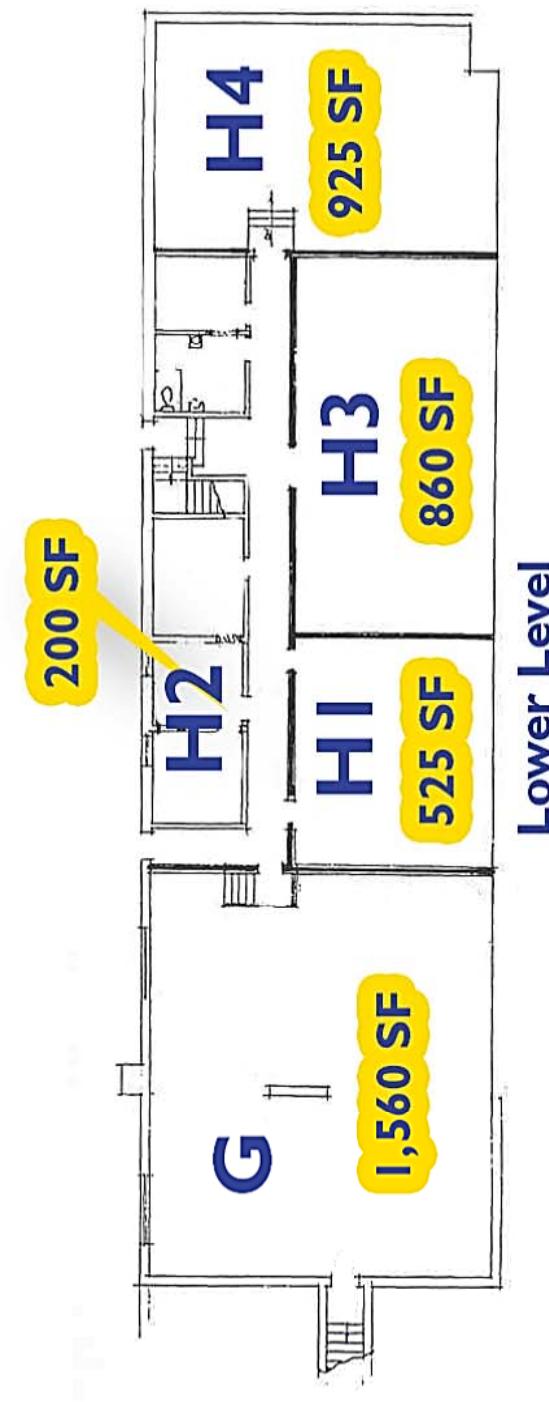
PLAZA 2331
2331 East Market Street
(Springetsbury Township)
York, Pennsylvania

EAST MARKET STREET (RT. 462)

158.10'

MEMORY LANE





Attachment C

Previous Reports

May 4, 2015

Ryan Carr, P.G.
PA DEP
909 Elmerton Ave.
Harrisburg, PA 17110

RE: eFACTS #62810
Plaza 2331 Commercial Property
Act 2 Reports Submittal
IEC Project No. 0126.001.15

Dear Ryan:

In follow-up to our recent telephone discussion, Independence Environmental Consulting, LLC (IEC), on behalf of Ms. Barbara Elliott, owner and remediator, is pleased to submit for your review, two copies of the enclosed Combined Remedial Investigation Report & Final Report (RIR/FR) for the commercial property located at 2331 East market St., in Springettsbury Township, York County, PA. The above referenced property is the location of a historic dry cleaner operation, which appears to have released dry cleaning fluid to the subsurface. The impacts of the release, and actions planned/taken to address those impacts, are detailed in the RIR/FR, which has been prepared to address technical requirements for remediation under Pennsylvania's Land Recycling and Environmental Remediation Standards Act of 1995 (Act 2).

Thank you, in advance, for your time and attention to the enclosed report, and I look forward to discussing this project once you have had an opportunity to review the document.

Very truly yours,



Paul Nachlas, P.G.
Independence Environmental Consulting, LLC

C: Ms. Barbara Elliott (w enclosure, electronic format)

Site-specific Standard Checklist

Notice of Intent to Remediate

1. Site name and location information, including latitude and longitude
2. Description of site and intended future use of property
3. Contact information
 - a. Remediator
 - b. Owner
 - c. Consultant
4. Site map
5. Submit Public Involvement Plan (if requested by municipality)

Remedial Investigation Report, Risk Assessment Report, Cleanup Plan

1. Remedial Investigation Report
2. Risk Assessment Report (if necessary)
3. Cleanup Plan (if necessary)
4. Transmittal sheet
5. Notification
 - a. Proof of publication of a summary of the reports and plan in a newspaper
 - b. Proof of submission of the reports and plan to municipality
6. Fees

Final Report

1. Transmittal Sheet
2. Notification
 - a. Proof of publication of NIR newspaper notice
 - b. Proof of submission of NIR to municipality
 - c. Proof of publication of final report newspaper notice
 - d. Proof of submission of final report to municipality
3. Fees
4. Final Report Summary per on-line format
5. Final Report
 - a. Site name and location information, including municipality, county, and latitude and longitude
 - b. Remediation
 - c. List of contaminants
 - d. Attainment demonstration
 - i. Residential or Non-residential
 - ii. Groundwater
 - iii. Soils
 - iv. If applicable
 - (1) Surface water requirements
 - (2) Air Quality requirements

- e. Narrative of site and remediation
 - i. History of site and land use
 - ii. Use of regulated substances on site
 - iii. Remediation performed
 - iv. Volume of contaminants remediated
- f. Post remediation care plan
- g. Contact information
 - i. Remediator
 - ii. Owner
 - iii. Consultant
- h. Attachments, including
 - i. Analytical results
 - ii. As applicable:
 - (1) Tables
 - (2) Maps and
 - (3) Figures
- i. Signatures

Preparer Name Paul Nachlas, P.G.Preparer Signature Paul E NachlasDate May 3, 2016

Land Recycling Program

Transmittal Sheet for Plan/Report Submission

Instructions: Please provide all requested information in each of the four sections. This transmittal sheet shall accompany any plan/report submitted to the Department under the Land Recycling Program. Proper completion of the Transmittal Sheet will assist Department review and may avoid a finding of plan/report deficiency. The Facility ID number can be obtained from the Department's Environmental Cleanup Program in the region where the site is located.

Section 1 - Site Identification

eFACTS Facility ID 62810

Site Name Plaza 2331

Site Address 2331 East Market St.

Municipality and County Springettsbury Township, York County

Section 2 - Remediation Standard . . Plan/Report . . Fees

Identify the remediation standard being pursued and the type of plan/report being submitted. Please note required Department fees follow each type of plan/report.

Check the relevant standard and the type of plan/report being submitted.

- | | |
|--|--|
| <input type="checkbox"/> Background Standard
Final Report (\$250 fee) | <input type="checkbox"/> Statewide Health Standard
Final Report (\$250 fee) |
| <input type="checkbox"/> Site-Specific Standard | <input type="checkbox"/> Special Industrial Area |
| <input checked="" type="checkbox"/> Remedial Investigation Report
(\$250 fee) | <input type="checkbox"/> Work Plan
(no fee) |
| <input type="checkbox"/> Risk Assessment Report
(\$250 fee) | <input type="checkbox"/> Baseline Environmental Report
(no fee) |
| <input type="checkbox"/> Cleanup Plan (\$250 fee) | |
| <input checked="" type="checkbox"/> Final Report (\$500 fee) | |

Ensure your check covers all required fees and is made payable to the **Commonwealth of Pennsylvania**.

Section 3 - Municipal/Public Notice Confirmation

There are two stages in the Land Recycling Program where municipal and public notices are required. Read the information associated with each stage. You will be asked to confirm that information establishing your compliance with these notification requirements has been included with this submission.

- Check here if you are planning to meet the Background or Statewide Health Standard and your Final Report has been submitted within 90 days of the release.

Indicate date of release here _____

No further completion of this section is required if your Final Report for these two standards conforms to the 90 day time frame.

Stage 1 - Notice of Intent to Remediate (NIR)

- Check here to confirm you have included proof that a copy of your NIR was provided to each municipality where your site is located. Proof will be a copy of your cover letter and a copy of a signed certified mail receipt slip from the municipality.
- Check here to confirm a copy of a proof of publication document from a newspaper serving the area of your site has been included with this submission.
- Check here to indicate that a Site-Specific Standard or a Special Industrial Area is involved and a municipal request was received for development of a public involvement plan. The plan/report submission shall include municipality and public comments, which were submitted, and your responses to those comments.

Stage 2 - Cleanup Plan/Report Submission

4/28/2016 Place date here that each municipality was notified of any plan or report submitted under any of the three remediation standards.

York Dispatch/York Daily Record 4/29/2016 Place the newspaper name and date that your notice of your plan/report submission was published.

Section 4 - Project Contact

On the lines below, place the name, company, and business phone number of the individuals who can be contacted regarding this submission:

Paul Nachlas, P.G. 717-503-4200



FINAL REPORT SUMMARY

The Final Report Summary (FRS) is a brief report consisting of set of data required in addition to the Act 2 Final Report. The summary is used in part as a reference to the Final Report Approval Letter which conveys liability relief to the remediator and other applicable persons. It is of value long after the remediation to be used by the public and Department in understanding key information about the site and remediation.

This use is increased by the fact that it will ultimately be merged into the Department's eFACTS system, which allows the public to have the ease of computer access to environmental information at sites. For more information, see www.ahs.dep.pa.gov/eFACTSWeb/default.aspx. Finally, the summary will be used by the Department to help to better assess the status and the level of success of the program. In the past, numbers of sites remediated has been tracked. With the inclusion of this summary information, progress can be tracked in many specific ways, including identification of individual chemical constituents, and the mass treated, removed or managed safely in place.

Identification

Property Name Plaza 2331

Property Descriptor Commercial Property with Former Dry Cleaner

Address / Location

Address 2331 East Market St.

City York

Zip Code 17402

Municipality(s) Springettsbury Twp.

County(ies) York

Latitude 40 ° (deg). 58 ' (min) 28.4592 " (sec) Longitude -76 ° (deg). 40 ' (min) 52.626 " (sec)

Horizontal Collection Method Google Earth

Horizontal Reference Datum _____

Reference Point _____

Property Specifics

Size of Property 1.438 acres

Number of Sites 1

Combined acreage of sites 1.438 acres

Remediation

Standards attained or special industrial area attainment. (Check all that apply. Can use multiple.)

Background Statewide Health Site-Specific Special Industrial Area

Proposed future property use - scenario for which the attainment of Statewide Health standard is demonstrated

Residential Non-residential

List of contaminants

Soils

Chemical Name	CAS Number	Mass Contaminant Treated or Removed (lbs.)	Mass Contaminant Managed on Site (lbs.)
Tetrachloroethene (PCE)	127-18-4		200
Trichloroethene (TCE)	79-01-6		75
Cis-1,2-dichloroethene (cis-1,2-DCE)	156-59-2		50
Vinyl chloride (VC)	75-01-4		20

Groundwater

Chemical Name	CAS Number	Mass Contaminant Treated or Removed (lbs.)	Mass Contaminant Managed on Site (lbs.)

Remediation

Number of sampling rounds for groundwater attainment: 6

Special Features

Non-use aquifer approval date: _____

Area-wide background approval date: _____

Amount of waste removed other than soil or groundwater (cubic yards): _____

Municipal ordinance prohibiting groundwater use:

Springettsbury Township Ordinance 289-12 F specifies that the minimum lot size where on-lot sewage disposal systems and wells are proposed shall be two acres. Ordinance 319-13 B further specifies that "Existing on-lot or private water systems may, with the approval of the York Water Company and the Pennsylvania Department of Environmental Protection, be maintained and used for irrigation, livestock, fire protection, or other purposes not prohibited by York Water Company's operation policies." Therefore, while the Ordinance does not prohibit the use of wells, it does stipulate that a well's use is only permitted with approval of York Water Company and the PADEP.

Post remediation care plan:

A sub-slab depressurization system must be maintained at all times to eliminate the risk for VOC vapor migration into the building and impacting indoor air quality. In addition, impervious surfaces must be maintained to ensure the lack of a direct contact pathway, though no site soils have been encountered at concentrations greater than MSCs.

Other Programs

- Key Site
- Multi-site Agreement; Date: _____
- Enterprise Zone
- Keystone Opportunity Zone

Administrative

- Municipality request for public involvement plan

Deed notification

- Deed acknowledgment:

- Environmental covenant:

Once approved by the Department, the environmental covenant will be recorded with York County's Recorder of Deeds.

Cleanup cost (\$): 50,000

Jobs created/saved: 10

Narrative: Provide property history and description, site characterization findings, site description, summary of remediation, summary of attainment demonstration, description of pathway elimination, engineering and institutional controls, and benefits of land reuse, when applicable.

The property was developed in 1956 and a dry cleaning operation existed from 1956 until approximately 1995, and that operation involved release of fluids to the subsurface. Site characterization determined that soils contain PCE, TCE, and cis-1,2-DCE at concentrations greater than soil-to-groundwater MCSs, but less than direct contact MSCs for non-residential properties. Groundwater of the site contains these VOCs plus vinyl chloride at concentrations above MSCs, though only the three VOCs are in groundwater migrating beyond the property boundary. The subject property is fully developed and covered by asphalt, concrete, or the building; no soils are exposed. Groundwater to the project area is supplied by York Water Company. The property is situated near the intersection of East Market St and Memory Lane in an area zoned for commercial uses only. Remediation entails installation and operation of a sub-slab depressurization system, and this engineering control, plus institutional controls of maintaining impervious cover, will be memorialized by environmental covenant recorded on the property's deed.

Remediator / Property Owner / Consultant. Complete the form below for each recipient obtaining a release of liability upon approval of the final report. Attach additional sheets as necessary.

Remediator

Contact Person/Title <u>Barbara B. Elliott</u>	eFACTS Client ID* <u>68210</u>	
Relationship to Site <u>Owner/Remediator</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* <u>Individual</u>	
Phone Number <u>717-854-7544</u>	Email Address <u>chiped@aol.com</u>	
Company Name _____	EIN or Federal ID # _____	
Street Address <u>104 S. Ogontz St.</u>		
City <u>York</u>	State <u>PA</u>	Zip Code <u>17403</u>

Property Owner

Contact Person/Title <u>Barbara B. Elliott</u>	eFACTS Client ID* <u>68210</u>	
Relationship to Site <u>Owner/Remediator</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* _____	
Phone Number <u>717-854-7544</u>	Email Address <u>chiped@aol.com</u>	
Company Name _____	EIN or Federal ID # _____	
Street Address <u>Owner/Remediator</u>		
City <u>York</u>	State <u>PA</u>	Zip Code <u>17403</u>

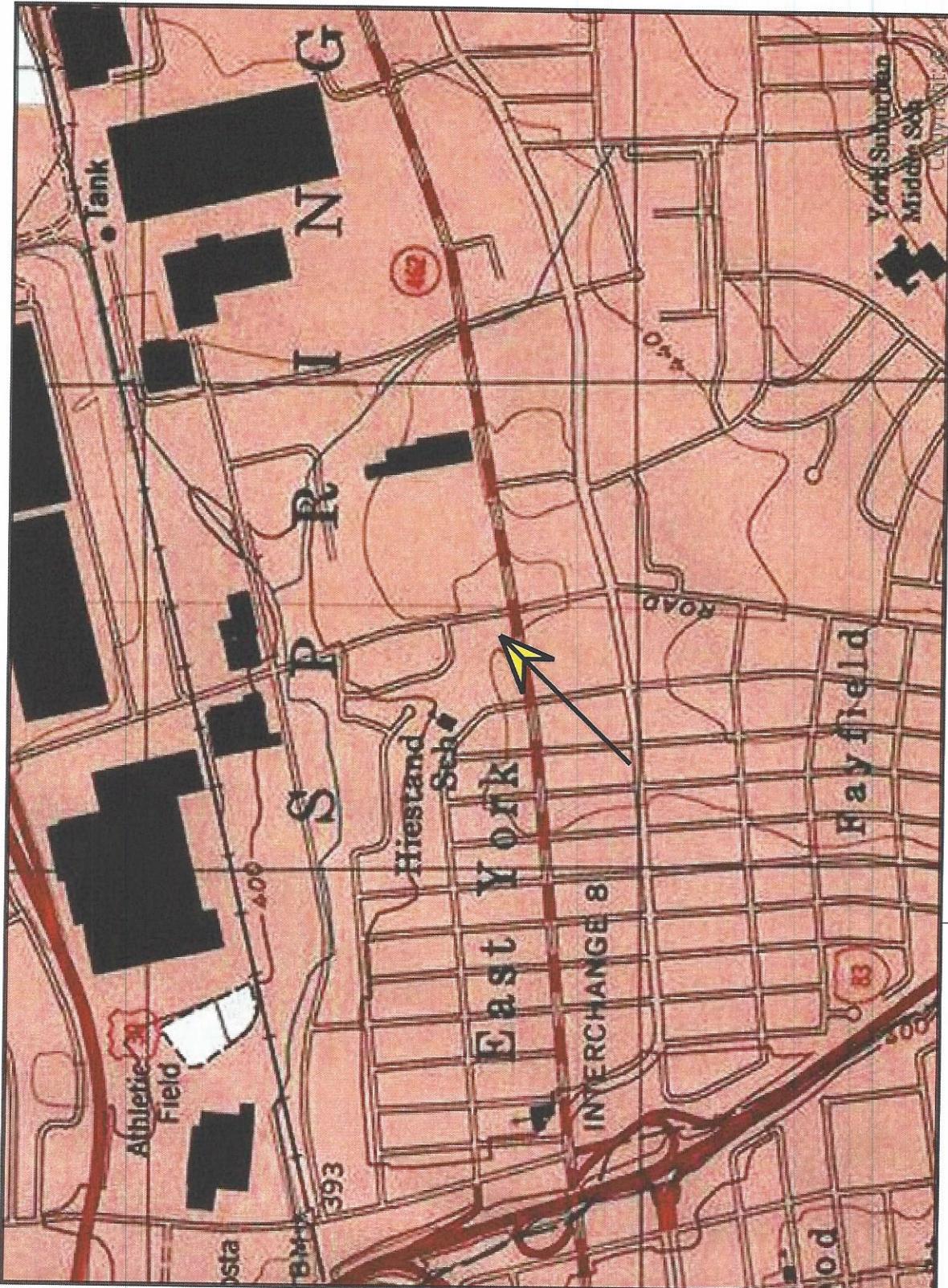
Consultant

Contact Person/Title <u>Paul Nachlas, P.G.</u>	eFACTS Client ID* _____	
Relationship to Site <u>Consultant</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* <u>LLC</u>	
Phone Number <u>717-503-4200</u>	Email Address <u>pnachlas@independenceenv.com</u>	
Company Name <u>Independence Environmental Consltg</u>	EIN or Federal ID # _____	
Street Address <u>1750 Kaylor Rd</u>		
City <u>Hummelstown</u>	State _____	Zip Code <u>17036</u>

*Include eFACTS Client ID (if known) – "Client Types" below:

Association/Organization	Limited Liability Company	Partnership-General
Authority	Limited Liability Partnership	Partnership-Limited
County	Municipality	School District
Estate/Trust	Non-Pennsylvania Government	Sole Proprietorship
Federal Agency	Other (Non-Government)	State Agency
Individual	Pennsylvania Corporation	

Attachments: In addition to the data entered in this FRS, the Department requests scanned image(s) of a map view of the site indicating, at a minimum, the boundaries of the "site" relative to the locations of the adjacent property boundaries. The location of the site (as defined by Act 2) is that which will receive the liability relief conveyed by Act 2, Chapter 5. The maps may portray other features but should clearly show the Act 2 site boundaries. You may also attach other applicable image files or attachments. These files should be in Adobe Acrobat (*.pdf), GIF (*.gif) or JPEG file interchange format (*.jpg).

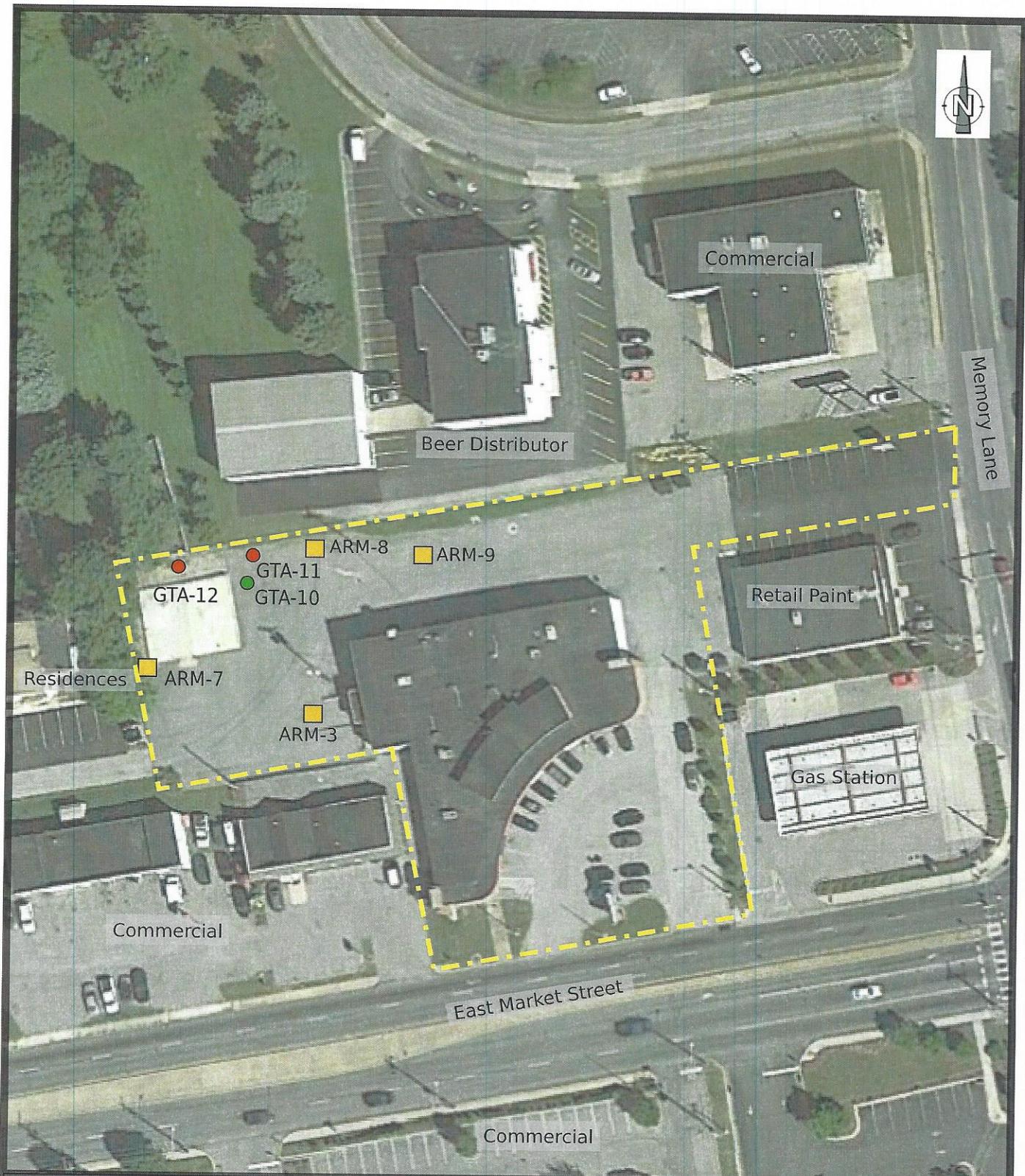


Plaza 2331 Commercial Property
2331 East Market Street
City of York, PA

FIG. 1 SITE LOCATION MAP

Independence
Environmental
Consulting, LLC
www.IndependenceEnv.com

PROJECT NO. D0126.001.15	DATE APRIL 29, 2016
-----------------------------	------------------------



Plaza 2331 Commercial Property
2331 East Market Street
City of York, PA

- GTA SHALLOW WELL LOCATION & ID
- GTA DEEP WELL LOCATION & ID
- ARM WELL LOCATION AND ID

FIG. 2 SITE LAYOUT & WELL LOCATION MAP

**Independence
Environmental
Consulting, LLC**

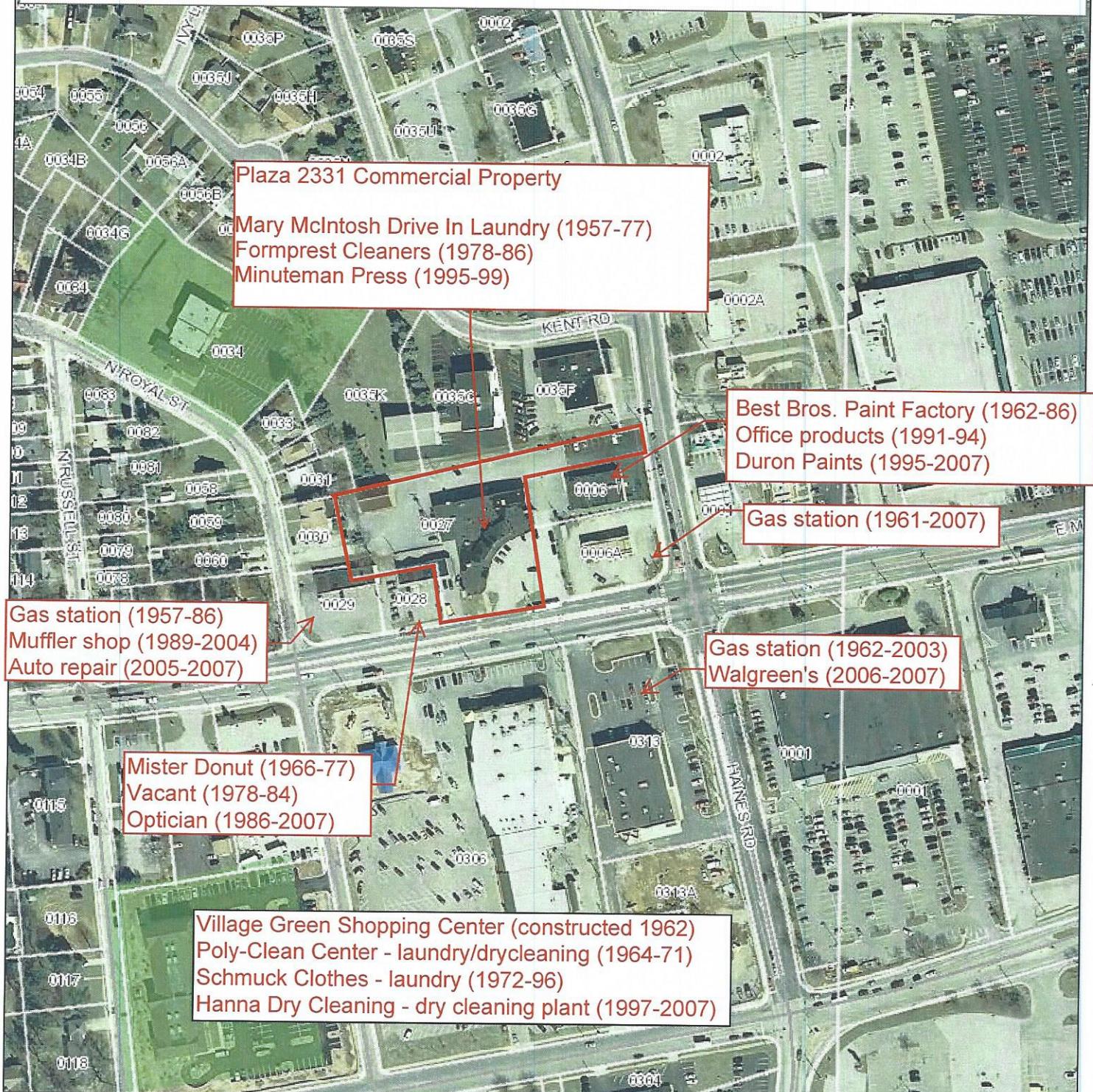


www.IndependenceEnv.com

PROJECT No.
0126.001.16

DATE
APRIL 29, 2016

Plaza 2331
City Directory Summary (1948 - 2007 directories)



York
County
Assessment
Office



Road
Municipalities
100 yr Floodplain
Easements
Maps are not from actual survey



06/18/2014
Scale 1:2400

Site-specific Standard Checklist

Notice of Intent to Remediate

1. Site name and location information, including latitude and longitude
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3. Contact information
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 - b. Owner
 - c. Consultant
4. Site map
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1. Remedial Investigation Report
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 - a. Proof of publication of a summary of the reports and plan in a newspaper
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 - iv. If applicable
 - (1) Surface water requirements
 - (2) Air Quality requirements

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 - iv. Volume of contaminants remediated
- f. Post remediation care plan
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 - iii. Consultant
- h. Attachments, including
 - i. Analytical results
 - ii. As applicable:
 - (1) Tables
 - (2) Maps and
 - (3) Figures
- i. Signatures

Preparer Name Paul Nachlas, P.G.

Preparer Signature Paul E Nachlas

Date May 3, 2016

Land Recycling Program

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eFACTS Facility ID 62810

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Municipality and County Springettsbury Township, York County

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- | | |
|--|--|
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Final Report (\$250 fee) | <input type="checkbox"/> Statewide Health Standard
Final Report (\$250 fee) |
| <input type="checkbox"/> Site-Specific Standard | <input type="checkbox"/> Special Industrial Area |
| <input checked="" type="checkbox"/> Remedial Investigation Report
(\$250 fee) | <input type="checkbox"/> Work Plan
(no fee) |
| <input type="checkbox"/> Risk Assessment Report
(\$250 fee) | <input type="checkbox"/> Baseline Environmental Report
(no fee) |
| <input type="checkbox"/> Cleanup Plan (\$250 fee) | |
| <input checked="" type="checkbox"/> Final Report (\$500 fee) | |

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4/28/2016 _____ Place date here that each municipality was notified of any plan or report submitted under any of the three remediation standards.

York Dispatch/York Daily Record _____ 4/29/2016 _____ Place the newspaper name and date that your notice of your plan/report submission was published.

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Paul Nachlas, P.G. 717-503-4200 _____

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Property Descriptor Commercial Property with Former Dry Cleaner

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Municipality(s) Springettsbury Twp.

County(ies) York

Latitude 40 ° (deg). 58 ' (min) 28.4592 " (sec)

Longitude -76 ° (deg). 40 ' (min) 52.626 " (sec)

Horizontal Collection Method Google Earth

Horizontal Reference Datum _____

Reference Point _____

Property Specifics

Size of Property 1.438 acres

Number of Sites 1

Combined acreage of sites 1.438 acres

Remediation

Standards attained or special industrial area attainment. (Check all that apply. Can use multiple.)

Background Statewide Health Site-Specific Special Industrial Area

Proposed future property use - scenario for which the attainment of Statewide Health standard is demonstrated

Residential Non-residential

List of contaminants

Soils

Chemical Name	CAS Number	Mass Contaminant Treated or Removed (lbs.)	Mass Contaminant Managed on Site (lbs.)
Tetrachloroethene (PCE)	127-18-4		200
Trichloroethene (TCE)	79-01-6		75
Cis-1,2-dichloroethene (cis-1,2-DCE)	156-59-2		50
Vinyl chloride (VC)	75-01-4		20

Groundwater

Chemical Name	CAS Number	Mass Contaminant Treated or Removed (lbs.)	Mass Contaminant Managed on Site (lbs.)

Remediation

Number of sampling rounds for groundwater attainment: 6

Special Features

Non-use aquifer approval date: _____

Area-wide background approval date: _____

Amount of waste removed other than soil or groundwater (cubic yards): _____

Municipal ordinance prohibiting groundwater use:

Springettsbury Township Ordinance 289-12 F specifies that the minimum lot size where on-lot sewage disposal systems and wells are proposed shall be two acres. Ordinance 319-13 B further specifies that "Existing on-lot or private water systems may, with the approval of the York Water Company and the Pennsylvania Department of Environmental Protection, be maintained and used for irrigation, livestock, fire protection, or other purposes not prohibited by York Water Company's operation policies." Therefore, while the Ordinance does not prohibit the use of wells, it does stipulate that a well's use is only permitted with approval of York Water Company and the PADEP.

Post remediation care plan:

A sub-slab depressurization system must be maintained at all times to eliminate the risk for VOC vapor migration into the building and impacting indoor air quality. In addition, impervious surfaces must be maintained to ensure the lack of a direct contact pathway, though no site soils have been encountered at concentrations greater than MSCs.

Other Programs

- Key Site
- Multi-site Agreement; Date: _____
- Enterprise Zone
- Keystone Opportunity Zone

Administrative

- Municipality request for public involvement plan

Deed notification

- Deed acknowledgment:

- Environmental covenant:

Once approved by the Department, the environmental covenant will be recorded with York County's Recorder of Deeds.

Cleanup cost (\$): 50,000

Jobs created/saved: 10

Narrative: Provide property history and description, site characterization findings, site description, summary of remediation, summary of attainment demonstration, description of pathway elimination, engineering and institutional controls, and benefits of land reuse, when applicable.

The property was developed in 1956 and a dry cleaning operation existed from 1956 until approximately 1995, and that operation involved release of fluids to the subsurface. Site characterization determined that soils contain PCE, TCE, and cis-1,2-DCE at concentrations greater than soil-to-groundwater MCSs, but less than direct contact MSCs for non-residential properties. Groundwater of the site contains these VOCs plus vinyl chloride at concentrations above MSCs, though only the three VOCs are in groundwater migrating beyond the property boundary. The subject property is fully developed and covered by asphalt, concrete, or the building; no soils are exposed. Groundwater to the project area is supplied by York Water Company. The property is situated near the intersection of East Market St and Memory Lane in an area zoned for commercial uses only. Remediation entails installation and operation of a sub-slab depressurization system, and this engineering control, plus institutional controls of maintaining impervious cover, will be memorialized by environmental covenant recorded on the property's deed.

Remediator / Property Owner / Consultant. Complete the form below for each recipient obtaining a release of liability upon approval of the final report. Attach additional sheets as necessary.

Remediator

Contact Person/Title <u>Barbara B. Elliott</u>	eFACTS Client ID* <u>68210</u>
Relationship to Site <u>Owner/Remediator</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* <u>Individual</u>
Phone Number <u>717-854-7544</u>	Email Address <u>chiped@aol.com</u>
Company Name _____	EIN or Federal ID # _____
Street Address <u>104 S. Ogontz St.</u>	
City <u>York</u>	State <u>PA</u>
	Zip Code <u>17403</u>

Property Owner

Contact Person/Title <u>Barbara B. Elliott</u>	eFACTS Client ID* <u>68210</u>
Relationship to Site <u>Owner/Remediator</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* _____
Phone Number <u>717-854-7544</u>	Email Address <u>chiped@aol.com</u>
Company Name _____	EIN or Federal ID # _____
Street Address <u>Owner/Remediator</u>	
City <u>York</u>	State <u>PA</u>
	Zip Code <u>17403</u>

Consultant

Contact Person/Title <u>Paul Nachlas, P.G.</u>	eFACTS Client ID* _____
Relationship to Site <u>Consultant</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* <u>LLC</u>
Phone Number <u>717-503-4200</u>	Email Address <u>pnachlas@independenceenv.com</u>
Company Name <u>Independence Environmental Conslg</u>	EIN or Federal ID # _____
Street Address <u>1750 Kaylor Rd</u>	
City <u>Hummelstown</u>	State _____
	Zip Code <u>17036</u>

*Include eFACTS Client ID (if known) – “Client Types” below:

Association/Organization	Limited Liability Company	Partnership-General
Authority	Limited Liability Partnership	Partnership-Limited
County	Municipality	School District
Estate/Trust	Non-Pennsylvania Government	Sole Proprietorship
Federal Agency	Other (Non-Government)	State Agency
Individual	Pennsylvania Corporation	

Attachments: In addition to the data entered in this FRS, the Department requests scanned image(s) of a map view of the site indicating, at a minimum, the boundaries of the "site" relative to the locations of the adjacent property boundaries. The location of the site (as defined by Act 2) is that which will receive the liability relief conveyed by Act 2, Chapter 5. The maps may portray other features but should clearly show the Act 2 site boundaries. You may also attach other applicable image files or attachments. These files should be in Adobe Acrobat (*.pdf), GIF (*.gif) or JPEG file interchange format (*.jpg).

COMBINED REMEDIAL INVESTIGATION REPORT & FINAL REPORT

PLAZA 2331 COMMERCIAL PROPERTY EFACTS #62810

**2331 EAST MARKET STREET
SPRINGETTSBURY TOWNSHIP
YORK COUNTY, PENNSYLVANIA**

April 29, 2016

PREPARED FOR SUBMITTAL TO:

**Barbara Elliott
104 Ogontz Street
York, Pennsylvania 17403**

PREPARED BY:

**Independence Environmental Consulting, LLC
1750 Kaylor Road
Hummelstown, Pennsylvania 17036
(717) 503-4200**

IEC PROJECT No. 0126.001.15

Prepared by:



Independence Environmental Consulting, LLC

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- Appendix A - 2011 Phase II Environmental Site Assessment Report by SSM Group, Inc.
- Appendix B - Data Tables and Laboratory Analysis Reports Generated by ARM Group, Inc.
- Appendix C - Notice of Intent to Remediate & Administrative Notifications
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- Appendix G - Mann-Kendall Statistical Test Output
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SUMMARY

This Combined Remedial Investigation Report & Final Report (RIR/FR) is prepared for an operating commercial property located at 2331 East Market St. in Springettsbury Township, York County, Pennsylvania (subject property). A Notice of Intent to Remediate (NIR) pursuant to the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) was submitted to the Pennsylvania Department of Environmental Protection (PADEP) for the subject property in August 2012. The NIR proposed the use of a combination of Act 2's Statewide Health and Site Specific Standards pursuant to PA Code, Title 25, Chapter 250.

The 1.438-acre property with frontage on East Market St. has a single, two-story building that was built in 1956 and has served as commercial/retail and business offices exclusively. At least one of the tenants is known to have been a laundry, though it is uncertain that dry cleaning operations were actually performed at the subject property as part of that business' operations. At least two other dry cleaning businesses are located within 600 feet of the subject property. These cleaners are located directly upgradient with respect to groundwater flow, though neither, like the subject property, is recorded as having had releases of dry cleaning fluid. Notwithstanding the fact that significant concentrations of volatile organic compounds (VOCs) are not present in soils of the subject property, the subject property seeks to attain Act 2 relief of liability for subsurface conditions described herein.

Environmental testing that was initiated in 2011 discovered VOCs such as those used as dry cleaning fluids in the subsurface of the subject property. The impacts were assumed to be attributable to the former laundry, which vacated the subject property in approximately 1999. The two upgradient dry cleaners remain operational and have been in business since the early 1960s.

Groundwater beneath the subject property occurs at depths on the order of 10 feet below ground surface (bgs) as an unconfined water table aquifer. Bedrock underlying the property is limestone of the Conestoga Formation, which is an irregular surface overlain by fine grained, predominantly clay overburden. Seventeen soil samples from thirteen soil borings were laboratory analyzed, with VOCs detected at only three of the soil boring locations. Detection of any VOCs above a medium-specific concentration (MSC) is limited to perchloroethene (PCE) in one of the 17 soil samples; PCE will attain a Site Specific Standard for soils. Trichloroethene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE) were detected in soils at two of the 13 soil boring locations, though at concentrations below MSCs. PCE, TCE, cis-1,2-DCE and vinyl chloride (VC) have each been detected at concentrations above MSCs in groundwater of the subject property; these four VOCs will attain a Site Specific Standard.

The property is entirely covered by impervious surfaces. Potable water is supplied to the property and surrounding areas by York Water Company, and no water supply wells exist within one-quarter of a mile. Detached single family homes are situated downgradient of the site in a north and northwesterly direction, and soil gas testing indicates no risk for vapor migration to impact indoor air quality of those dwellings. The site will employ engineering and institutional controls to attain a Site Specific Standard for PCE in soils and for PCE, TCE, cis-1,2-DCE, and VC in groundwater.

1.0 INTRODUCTION

On behalf of Ms. Barbara Elliott, Independence Environmental Consulting, LLC (IEC) has prepared this Combined Remedial Investigation Report and Final (RIR/FR) for the commercial property located at 2331 East Market St. in Springettsbury Township, York County, Pennsylvania (the “subject property” as shown on Figure 1). Ms. Elliott is the sole owner of the subject property and the remediator in this project; she has owned the subject property since 1996. This report is submitted pursuant to the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and seeks to address requirements enabling the subject property to obtain relief of liability for VOCs in soils and groundwater.

The 1.438-acre property has been continuously used since 1956 by lease-tenants for business office operations, retail sales operations, and commercial business operations. No manufacturing operations have occurred on the subject property throughout its history.

Environmental investigations and sampling began at the subject property in 2011, and four environmental firms have worked on this project with IEC being the fourth and current investigator. Data generated by IEC through its investigations are presented throughout this RIR/FR with those data summarized in figures and tables prepared by IEC as referred to throughout this report. Figures and tables created by preceding investigating consultants have also been relied on significantly by IEC in creating this RIR/FR.

In 2011, SSM Group, Inc. (SSM) performed Phase I and Phase II Environmental Site Assessments (ESAs) of the subject property. SSM's Phase I ESA indicated that a laundry, possibly with dry cleaning services, had been among the commercial tenants occupying the subject property from 1957 until 1999. In light of that information, SSM conducted Phase II sampling, which included 16 soil borings around the subject property's building. Soils recovered from all borings were field-tested for vapor-phase VOCs using a portable, photoionization detector (PID). Based on PID measurements and observations, 17 soil samples were selected from 13 of the 16 test borings, and those samples were submitted to a suitably qualified testing laboratory for analysis. Analysis of the samples revealed VOCs characteristic of dry cleaning fluids, including tetrachloroethene (PCE), trichloroethene (TCE), and cis-1,2-dichloroethene (cis-1,2-DCE). A copy of SSM's 2011 Phase II ESA report is included in Appendix A, and review of that document indicates that detection of VOCs in soils is substantially limited to the area of the loading dock at the rear, northwest corner, of the subject property's building.

Later in 2011, ARM Group, Inc. (ARM) conducted environmental testing at the subject property, which included installation of five groundwater monitoring wells in the area of the loading dock where SSM's soil borings indicated VOCs adsorbed on soils. ARM did not prepare well logs for their work or provide any well construction information to the owner of the subject property, though information regarding these wells has been generated by direct measurements of their wells by others. Groundwater analysis reports for samples from the wells are available, and those data indicated that the VOCs detected in soils of the subject property were also present in groundwater, as was vinyl chloride (VC). The VOCs in ARM's groundwater samples are also noteworthy in that they indicate concentrations in groundwater

exceeding MSCs for the individual VOCs. Copies of data tables and laboratory analysis reports generated by ARM are included as Appendix B.

A Notice of Intent to Remediate (NIR) was submitted to the PADEP on August 2, 2012 by ARM. The NIR proposed the use of a combination of the Act 2 Statewide Health and Site Specific Standards. There was no request for public or municipal involvement during the 30-day response period following the NIR. A copy of the NIR and associated administrative notification materials is included in Appendix C.

In 2014, Geo-Technology Associates, Inc. (GTA) became the owner's consultant for this project. GTA's work encompassed installation of three additional monitoring wells and quarterly sampling. Copies of construction logs for the GTA wells and laboratory analysis reports for samples collected are during GTA's tenure are included in Appendix D.

Since December 2015, Independence Environmental Consulting, LLC (IEC) commenced work focused on assimilating previous consultants' work and preparing this RIR/FR in an effort to close this matter under Act 2 and secure a release of liability for the VOCs in soils and groundwater of the subject property. IEC's work has included inspection of all preceding reports of findings, groundwater sampling, and soil gas sampling for evaluation of risk to indoor air quality for the subject and downgradient properties.

Figure 2 provides an overview of the subject property's location along the heavily commercialized Market St. corridor and its intersection with Memory Lane. The subject property is situated on the north side of East Market St. A residential community resides to the northwest of the subject property, and other commercial properties are to the immediate north and east. Across East Market St. to the south is a commercial shopping center and other stand-alone commercial properties. One dry cleaning establishment is located at the southern end of the shopping center, and a stand-alone building directly east of that location is a second dry cleaner. These cleaners are currently in business and have been at these locations since the early 1960s.

No upgradient wells have been constructed on the south side of the subject property building so it is not possible to assess the potential that VOCs originate in part or whole from either of the two dry cleaners to the south, but the owner of the subject property prefers to reach site closure without the effort of assessing VOCs as a background condition. Therefore, this RIR/FR assumes the subject property is the origin of the VOCs and presents site characterization information and data to support remediation to the Site Specific Standard.

SSM's 16 soil borings discussed above appear to have been positioned around the building to establish coverage on all sides, though detection of VOCs is limited to the area of a loading dock for upper level lease space that is situated at the northwestern corner of the building. The monitoring wells installed by ARM and GTA are situated near this loading dock and to the north and northwest. These ARM/GTA wells and the SSM soil borings, which contain some level of VOCs, constitute "the site" per Act 2 and represent the area to be remediated.

2.0 SITE DESCRIPTION

2.1 Location

Address: 2331 East Market St.
Municipality and County: Springettsbury Township, York County
U.S.G.S Quadrangle: York, Pennsylvania (Figure 1)
Latitude, Longitude: 39.974572°N and 76.681285°W (approximate)
Tax Parcel I.D.: 460000200270000000

2.2 Layout

The 1.438-acre property is comprised of one tax parcel with approximately 170 ft. of road frontage along East Market St. The property is otherwise an irregularly shaped parcel. A two-story building is centrally situated on the subject property, and because the north side of the subject property is situated approximately 8 feet lower than the front (south) side of the subject property, both levels are accessible as walk-in on grade. Asphalt paving constitutes the balance of ground cover so that the entire property is currently covered with impervious surfaces. Ingress/egress is accomplished via driveway access from East Market St. on the south, Memory Lane via a Duron Paint store on the east, and North Royal St. via an adjoining commercial building fronting onto East Market St., located to the west. The front and rear of the subject property are connected by a ramp driveway east of the building.

Figure 2 reveals that land use to the west and northwest of the subject property is predominantly detached, single-family residential homes that were substantially constructed after the mid-1930s. Drive-by reconnaissance of those properties suggests they are of slab-on-grade construction and serviced by public water and sewer. Lands to the north (along Memory Lane), east, and south are substantially in commercial uses, with those uses ranging from small stand-alone shops to large shopping centers. At least two gasoline stations immediately east of the subject property are longstanding operations that began in the 1960s, though only one of those stations remains in business since approximately 2010. Few, if any, industrial operations are located in the immediate vicinity of the subject property. Three retail gasoline stations now or previously located at the intersection of East Market St. and Memory Lane have had releases that have been remediated to Act 2 standards.

2.3 Topography

The subject property is developed with level ground on the north and south sides of its building. The front of the property is situated at approximately 420 feet above mean sea level while grade at the rear of the property is 412 feet above mean sea level. The front and the back sides of the subject property are connected via a ramped driveway along the east side of the building. Areas surrounding the subject property are generally level to the west and east, relatively higher to the south, and relatively lower to the north. Overall surface topography for the project locality is toward the northwest.

2.4 Geology

Mapping by the Pennsylvania Topographic and Geologic Survey indicates that the subject property is underlain by bedrock of an Ordovician-aged limestone of the Conestoga Formation. The Conestoga Formation consists of medium-gray, impure limestone with black, graphitic shale partings. It is conglomeratic at the base. The total thickness is at least 300 feet (Geyer and Wilshusen, 1982). The Conestoga Formation exhibits karst characteristics in York County, though the Pennsylvania Topographic and Geologic Survey's Open File mapping of Sinkholes and Karst-related Features of York County, PA (OF 95-06) does not indicate closed depressions or active sinkholes within approximately 1,000 feet of the subject property; no voids are indicated from available well logs for the site.

Soils beneath the subject property are mapped as Urban Land complex, which are reported to be soils that have been substantially altered or disturbed by development. Test borings constructed as part of SSM's site investigation work reported herein ranged between 5 feet and 18 feet in thickness, with the deeper soils occurring predominantly on the southern side of the property. These soils were predominantly clay with intermittent zones of coarser materials. These unconsolidated sediments are suspected to be the residuum of bedrock decomposition. Groundwater saturation occurs at depths on the order of 10 feet bgs.

2.5 Hydrogeology

Mapping available from the York County Geographic Information System indicates that an unnamed tributary of Mill Creek is located approximately 1,100 feet to the north of the subject property, and that water course flows to the west and joins Mill Creek, which itself is situated approximately 3,800 feet to the west. Mill Creek flows to the north and discharges to Codorus Creek at a distance of approximately 2.5 miles to the west.

Groundwater at the site exists as an unconfined water table aquifer with saturation occurring in either the unconsolidated overburden or the underlying limestone bedrock. Accordingly, groundwater flow through the unconsolidated overburden is through the primary porosity of the sediments, while flow through the bedrock is through secondary fracture porosity of the underlying Conestoga Formation. As depicted on Figure 3, groundwater beneath the site migrates from the south-southeast to the north-northwest at a relatively low gradient of 0.025 feet/foot, or 2.5 percent.

3.0 BACKGROUND

3.1 Site History

The subject property was substantially undeveloped until the present-day structure was built circa 1956, and since that time, the subject property has been used almost exclusively by commercial and retail lease tenants. Historic information indicates that lease tenants at the property include laundry operations, which consisted of Mary McIntosh Drive-In Laundry from 1957 to 1977, Formprest Cleaners from 1978-1986, and Minuteman Press from 1995-1999, though this tenant may have been a copy/print operation as opposed to a laundry business. While laundry operations are known with certainty to have occurred, the historic record is less certain though suggestive of dry cleaning operations having occurred for some duration. No other lease tenant or activity is known or suspected to have been present that used chlorinated VOCs in its operations.

4.0 SOIL CHARACTERIZATION

4.1 Soil Boring Methodology

During August 2011, 16 soil borings were drilled around the exterior of the property's building under supervision of SSM. The borings were extended to the soil/bedrock interface, which was encountered at depths ranging between 2 feet and 18 feet bgs. Soils recovered from the borings were inspected for staining or discoloration, and these materials were also field-screened using a portable, photoionization detector (PID) to test for occurrences of vapor-phase, VOCs. Descriptive logs of soils recovered by SSM are included as Appendix A, and a figure by SSM, included also in Appendix A shows the locations of those borings.

Inspection of the SSM information indicates the soils of the property are predominantly clay soils, which are the residuum of the underlying Conestoga Formation, an Ordovician-aged limestone. Such soil are consistent with conditions reported by GTA in the course of their well installation work during 2014 when they installed three monitoring wells, designated GTA-10- GTA-11, and GTA-12. Well logs were prepared by GTA at that time are included as Appendix D of this RIR/FR.

4.2 Soil Boring Results

Soil samples collected from the test borings were collected in accordance with procedures applicable to soil media for analysis of VOCs by EPA Method 8260B. As reported, the samples were placed into laboratory-supplied glassware, cooled on ice, and submitted under chain of custody documentation to TestAmerica Laboratories, Inc. of King of Prussia, PA. Laboratory analysis reports for all soil samples are provided in SSM's Phase II investigation report, again, included herein as Appendix A.

The laboratory analysis reports are summarized on Table 1 of SSM's Phase II report, and on inspection of the table it is apparent that detection of VOCs is substantially limited to three VOCs: cis-1,2-DCE, PCE, and TCE. These VOCs were detected in four soil samples collected from three of the 16 soil borings completed. The locations of the three test borings containing detectable concentrations of VOCs are shown on SSM's Figure 1 and reveal that adsorbed VOCs occur in soils at the rear (north side) of the property building. One of those borings, SB-13, had soils sampled from 7 ft and at 13 ft bgs. In this case, PCE and TCE at this location exhibit an increasing concentration trend with increasing depth below ground. Groundwater information that will be discussed in more detail later in this report indicates that groundwater saturated soils occur at approximately 10 ft bgs at this location, which is consistent with the percent solids data for this location: 84% in the 7 ft sample and 80% in the 12 ft sample.

A second boring with adsorbed VOCs, SB-12 at 12 ft bgs, contained PCE at 1,100 milligrams per kilogram (mg/kg), which exceeds the soil-to-groundwater MSC for non-residential land use. This sample also appears to be from below the zone of saturation, and the laboratory reported a percent solids of 66% for this sample. All other VOCs in soils are less than MSCs at SB-5, SB-12, and SB-13 where reportable concentrations of VOCs were detected. There are no exceedances of direct contact MSCs at this site.

5.0 GROUNDWATER CHARACTERIZATION

5.1 Monitoring Well Construction

ARM installed nine groundwater monitoring wells on the subject property during October 2011. The method of installation was reportedly via Geoprobe equipment, though ARM did not generate well logs for their actual wells, which they designated as ARM-1 through ARM-9. Some of those wells have been abandoned for various reasons, and presently, only five of the original ARM wells remain, as follows: ARM-3, ARM-5, ARM-7, ARM-8, and ARM-9. The locations of these nine wells and a groundwater flow map for June 2013, coincident to ARM's final work at the subject property, are depicted on the map included as Appendix B. Also included in that appendix is a summary tabulation of groundwater quality data generated during ARM's tenure on this project.

In November 2014, GTA installed three additional groundwater monitoring wells designated GTA-10, GTA-11, and GTA-12. The locations of these three wells are depicted along with the five ARM wells on Figure 3 of this RIR/FR. GTA produced descriptive logs for their wells, which are included herein in Appendix D. Inspection of the logs indicates that GTA-10 and GTA-11 are constructed as a well-pair in that GTA-10 is drilled to 40 feet bgs and screened from 25 to 40 feet bgs, while GTA-11 penetrates to only 20 feet bgs and contains only 8 feet of screen interval. Both wells are constructed into the limestone bedrock and this well configuration effectively represents fracture flow in the uppermost portion of the aquifer (GTA-10) and fracture flow in a deeper section of the aquifer, 25 to 40 feet bgs (GTA-11).

5.2 Groundwater Flow

IEC measured static water levels in the ARM and GTA wells using an electronic interface probe on December 30, 2015. The depths to water in each well were adjusted relative to elevations of the top of the wells' casings, and the resulting groundwater contour map shown on Figure 3 is interpreted to represent the configuration of the water table surface at the time of sampling.

Inspection of Figure 3 reveals that the water table surface slopes to the north-northwest at a relatively low gradient, which is measured to be on the order of 0.025 feet/foot, or 2.5%. Groundwater flows through interstitial pores of the unconsolidated overburden as well as through fractures of the underlying limestone bedrock of the Conestoga Formation. Inspection of the GTA well logs in Appendix D indicates that no karst features were encountered during well drilling, though fractures are noted at various depths in the bedrock. The absence of karst features on the subject property and surrounding area is supported by mapping of Pennsylvania's Topographic and Geologic Survey (PA Topo-Geo) open file report for York (Kochanov, OF-95-06), which shows no sinkholes or closed depressions within 1,000 feet. Consequently, the potential that karst features influence groundwater flow within proximity to the subject property appears to be low. In summary, the groundwater table exhibits a gradient of approximately 0.03 feet per foot. Groundwater occurs as an unconfined water table aquifer with flow through the unconsolidated sediments as interstitial, grain-to-grain flow. Groundwater below the soil bedrock interface migrates through secondary pore space associated with fractures in the bedrock.

5.3 Groundwater Quality

The monitoring wells have been sampled on various occasions by ARM, GTA, or IEC. ARM originally sampled its monitoring wells on six occasions: 10/20/2011, 2/6/2012, 3/29/2012, 7/11/2012, 10/26/2012, and 6/19/2013. Subsequently, GTA collected samples from the five ARM wells as well as the three wells they installed. The GTA samplings occurred on five separate occasions: 11/13/13, 12/4/14, 3/13/15, 5/22/15, and 8/28/2015. Finally, IEC sampled the ARM and GTA wells on 12/30/15. The net outcome of these efforts is a considerable volume of groundwater data that can be used to characterize water quality of the subject property. The data for these individual sampling events are summarized on Table 1, and a copy of the laboratory report for samples collected by IEC are included in Appendix E.

On inspection of the data in Table 1 it is apparent that the highest concentrations of VOCs in groundwater occur at the location of a loading dock at the rear of the building, at the location of ARM-3 on Figure 3. The PCE concentration at this location has been measured as high as 10,400 micrograms per liter ($\mu\text{g}/\text{L}$), during the December 2014 sampling event, and it was measured in two samples from December 30, 2015, an original and a duplicate, at concentrations of 9,040 $\mu\text{g}/\text{L}$ and 7,980 $\mu\text{g}/\text{L}$. PCE has been measured as low as 3,590 $\mu\text{g}/\text{L}$, in the November 2013 sampling event, with the concentrations showing considerable seasonal variability.

Published sources cite the aqueous solubility for PCE as 275,000 $\mu\text{g}/\text{L}$. Applying the principal that non-aqueous phase liquids (NAPLs) are present when the solution-phase concentration in a sample is at ten percent of the solubility suggests that a concentration of 27,500 $\mu\text{g}/\text{L}$ would have to be present in order for NAPL to be a concern for a site. Given actual concentrations that have been measured for groundwater of the site, NAPL is not at risk of being present at this site, which appears to be consistent with soil data generated by SSM's soil borings, especially SB-12 where the greatest depth to the soil/bedrock interface was measured as 18 feet bgs, which, even when adjusted for differences in elevation, is still deeper than borings advanced along the northern side of the site.

Inspection of the spatial occurrences of PCE in groundwater as shown of Figure 3 reveals that the highest concentrations of PCE occur at ARM-3 adjacent to the loading dock at the rear of the site building. The next highest PCE concentrations are at ARM-7, and the concentrations at this location are greater than those observed at GTA-12 or GTA-11. The concentrations at ARM-8 and ARM-9 are comparatively inconsequential.

One inference that can be discerned from the water quality data is that PCE does not preferentially migrate vertically downward in the aquifer, which is based on the fact that PCE concentrations at GTA-10 are consistently lower than in samples of GTA-11. For example, during the December 2015 sampling event, GTA-11 contained PCE at 295 $\mu\text{g}/\text{L}$ while GTA-10 contained PCE at 90.5 $\mu\text{g}/\text{L}$, and lower PCE concentrations are consistently reported for the deeper GTA-10 with screen at 25 to 40 feet bgs than GTA-11, with screen at 12 to 20 feet bgs. The groundwater data for ARM-3, wells GTA-10 and GTA-11, and soil boring SB-12 support a conclusion that NAPLs are not present.

6.0 SOIL GAS/INDOOR AIR CHARACTERIZATION

6.1 Soil Gas Well Construction

IEC constructed three soil gas wells on the subject property that were sampled on two separate occasions: January 29, 2016 and March 4, 2016. In addition to the three soil gas wells, an indoor air sample was collected from a room on the lower level of the site building on both sampling locations; this room is adjacent to the loading dock that is suspected to be the source location. The locations of the three soil gas wells (designated as VP-1, VP-2, and VP-3) and one indoor air sample (designated as Ambient Air) are depicted on Figure 4. VP-1 is positioned near the downgradient point of compliance and is intended to provide data diagnostic of the potential for impact to downgradient residential properties situated to the northwest and along a flow line of some of the highest VOC concentrations at the site. VP-2 was constructed immediately adjacent to monitoring well ARM-3 at the loading dock, the source location. VP-3 is constructed through the concrete floor of the building's lower level to capture sub-slab soil gas beneath the subject property's building.

Vapor well VP-3 is essentially adjacent to an approximately 300-gallon concrete basin in a mechanical room on the lower level. This basin receives effluent from the sewerage system inside the building and is assumed to have received wastewaters when the laundry and dry cleaning operations were occurring at the subject property. The basin is equipped with grinder pumps that pump the sewerage effluent to a sewer line of the publically owned treatment works (POTW) that is located under East Market St.; the elevation of the street is at least 8 feet higher than the floor of the mechanical room where the basin resides in the building.

The Ambient Air sample was collected from a location in an unoccupied office suite located at the northwest corner of the lower level of the building. A dewatering sump is also located in this room to ensure that meteoric waters from heavy storm events do not flood the suite and damage its carpet/walls. Though the exact construction of the sump is unknown, it is assumed to be in communication with the subsurface soils by virtue of its purpose. This dewatering sump is also in close proximity to VP-3 in the mechanical room, which is accessed from this unoccupied office suite. Therefore, samples from VP-3 are expected to provide data indicative of a worst case risk for indoor air quality and the Ambient Air sample location provides a reliable direct measurement of that risk above the elevation of the concrete floor.

Soil gas wells were constructed after initially drilling a 2.5-inch hole through the asphalt or concrete surface then followed by a 1.5-inch boring using handheld Geoprobe tooling that was advanced to a depth of 5 feet bgs. One-quarter inch Teflon® tubing was knife-slotted across its bottom six inches, and the tubing was installed with the slots from approximately 54 - 60 inches bgs. The annulus was filled with clean sand to a depth of approximately 50 inches bgs, and hydrated granular bentonite was backfilled into the annulus to ground surface. The exposed end of the tubing was fitted with a brass ferrule and nut that could be used to make an air-tight connection to sampling apparatus (Summa® canister).

Once the two soil gas wells (VP-1 and VP-2) and one sub-slab soil gas well (VP-3) were constructed, the tubing of each was connected a 6-liter Summa® canister equipped with a flow controlling regulator set to draw air at a rate of approximately 85 milliliters of soil gas per minute. The Ambient Air sample was collected by setting the Summa® canister onto the concrete floor adjacent to a dewatering sump (in an unoccupied room on the lower level of the site building) and opening the valve to draw air from the room.

The sub-slab and ambient air sampling locations were biased to features that were thought to represent probable worse-case conditions. Specifically, VP-3 is adjacent to sewerage holding tank in the mechanical room in the basement where waste waters from all of the waste lines inside the building gravity-drain before being pumped through piping to the sanitary sewer lines operated by the POTW. The ambient air sample was collected immediately adjacent to a dewatering sump in the floor of the building's lower level. This location appears to represent a sample location with direct exposure to soil gas entering the building through the sump's open bottom.

The soil gas sampling occurred on January 29 and approximately five weeks (35 days) later on March 4, 2016. The samples were collected after connecting the tubing to a personal air sampling pump, which was allowed to run for approximately 5 minutes to purge ambient air from the soil gas well and to confirm that no free liquid was present. Following purging, the tubing was connected to a 6-liter Summa® canister with a regulator set for a one hour sample interval.

The January samples were delivered under chain of custody documentation to ALS Environmental Laboratory of Middletown, PA while the March samples were delivered under chain of custody to Eurofins Lancaster Laboratories of Leola, PA. Both samples were submitted for analysis of VOCs in air by EPA Method TO-15. The laboratory analysis reports are included in Appendix F, and the data from those reports are summarized on Table 2.

6.2 Soil Gas Results

Inspection of Table 2 reveals that up to nineteen analytes are reported for the four samples. The majority of the detectable compounds in the samples are aromatic VOCs that are characteristically associated with motor fuels not associated with this site. The VOCs that are the focus of this remediation are detected at the highest concentrations, with the highest concentrations detected in the VP-3 Sub-slab sample. In fact, while no concentrations of concern were detected in the January samples, the March samples for VP-3 Sub-slab and the Ambient Air samples indicate a risk for indoor air quality that will require remedial action to reduce the risk of VOCs in indoor air to acceptable levels. Specifically, Table 2 reflects that PCE and TCE are present in soil gas at concentrations of 110,000 µg/m³ and 7,300 µg/m³, which exceed the respective soil gas MSCs of 14,000 µg/m³ and 4,800 µg/m³. The Ambient Air sample in March contained PCE at a concentration of 260 µg/m³, which exceeds the indoor air quality MSC of 140 µg/m³; no exceedances were identified during the January sampling event. These data indicate that vapor-phase VOC concentrations are variable and at various times pose a risk of impacting indoor air quality.

7.0 CONCEPTUAL SITE MODEL

A Conceptual Site Model (CSM) can be generated from the historical knowledge of the subject property and the site characterization data developed for this site. This CSM accounts for the introduction of the chlorinated VOCs to the subsurface, their migration through the environment, and the fate of those compounds.

Considerable research of contamination at dry cleaner businesses by the USEPA and others has found that spillage (during delivery of new dry cleaning fluid and pick-up of spent solvents) is among the most common explanations for PCE released at properties like the subject property. Such an explanation is consistent with the occurrence of the highest PCE concentrations occurring at the loading dock of the subject property's building. The PCE, once released, is expected to have migrated through a relatively thin unsaturated zone, where depths to static water at ARM-3 are typically on the order of 8 feet bgs, before intersecting the groundwater table. The concentrations of PCE measured at ARM-3 since 2011 do not indicate the occurrence of non-aqueous PCE, which is interpreted to mean that any NAPL that may have been present at one time has attenuated and no NAPL remains.

Dry cleaning operations are known to have ceased at this property by at least 1999. It is reasonable to conclude that no PCE has been present onsite since at least that time. In addition, as PCE was never known to have been stored below grade and has not been present onsite since at least 1999, the mass of the existing source area is finite and is only expected to attenuate by natural desorption from soils and migration in groundwater. Once in the groundwater, the VOCs naturally partition from solution-phase to vapor-phase at the water table/atmosphere interface and from solution-phase to adsorbed-phase onto soils in the saturated zone and capillary fringe.

Following impact to site groundwater at the source, groundwater with solution-phase PCE and associated degradation compounds migrate to the north-northwest. That path takes groundwater toward lands occupied by detached, single-family dwellings to the north-northwest; those dwelling are all served by public water and sewer, as discussed further below. The soil and groundwater data screening criteria and the data from actual soil gas sampling (especially VP-1) confirm that the risk to indoor air quality for those downgradient residences is acceptable and does not require any remedial action.

Concentrations of solution-phase PCE at ARM-7 and GTA -12 are approximately one order of magnitude (10 times) lower than concentrations at ARM-3. These data indicate, therefore, significant attenuation of PCE concentrations at a distance on the order of 100 feet downgradient of the source location. Based on an assumption of comparative attenuation rates for groundwater downgradient of ARM-7 and GTA-12, PCE concentrations will attenuate to groundwater MSCs within approximately 500 feet of the subject property. In any case, the VOCs that are the focus of this work appear to exceed their MSCs at the property boundary, the point of compliance, though they are expected to naturally attenuate prior to contact by any human or ecological receptor as discussed below.

The elevated solution-phase PCE concentrations at ARM-7 are anomalous with respect to groundwater flow from the loading dock. One possible explanation is that dense NAPL migrated along the bedrock surface to the west of the loading dock before migrating in solution-phase to the north-northwest under natural hydraulic gradient. An alternate explanation would be an upgradient source associated with either of two other dry cleaning businesses located south of the subject property but in the context of the Site Specific Standard sought for this site, NAPL migration to the west from the loading dock area is the preferred explanation.

While the mass of VOCs in soils at the source is regarded as finite, and in fact attenuating naturally, VOC concentrations in groundwater remain erratic as evidenced from concentrations detailed on Table 1. The concentration fluctuations that are exhibited by these data are attributable to ephemeral fluctuations of the groundwater system coming in contact with impacted soils. Site soils, by virtue of being limestone residuum and as observed in materials recovered from the subsurface, are clays that have a very low hydraulic conductivity. As precipitation falls and enters the subsurface the water table rises and comes in direct contact with soils at the source. Because of the comparatively low hydraulic conductivity there is a relatively longer contact time in which VOCs desorb to soils. Precipitation events, therefore, are regarded as a factor that influence solution-phase concentrations, which are most pronounced at ARM-3 - the source area monitoring well. Monitoring wells downgradient of that location show much less fluctuation in their concentrations, though they also exhibit concentrations that are fairly consistent in magnitude.

Finally, Mann-Kendall statistical testing was performed for PCE only at ARM-3, ARM-7, and ARM-8. These wells were selected to provide an evaluation of the source area well (ARM-3) and two wells at the downgradient extent of the property (ARM-7 and ARM-8) that have been sampled on at least 10 occasions. Copies of Mann-Kendall output for these wells are included as Appendix G. The statistical evaluation was performed solely for PCE since the other VOCs are potentially intrinsic to the original dry cleaning fluid, or they are a result of degradation or breakdown of PCE. To the extent that a portion of the TCE and other degradation products are a result of degrading PCE their concentrations may actually increase as a function of time and as PCE transforms into TCE, which in turn degrades further, ultimately to chloroethene.

The output of the Mann-Kendall test for well ARM-3 indicates that there is no obvious trend in the data at either an 80% or 90% confidence level, though the coefficient of variation at this well is less than or equal to 1, in which case a stable plume condition is indicated. A similar condition is evident for well ARM-7, where, again, there is no obvious trend at either an 80% or 90% confidence level, but the coefficient of variation is less than or equal to 1, so a stable trend is indicated. In the case of ARM-8, the data, again, do not reveal a trend at either the 80% or 90% confidence levels, but in this case the coefficient of variation is greater than 1, and that condition indicates a non-stable plume condition. Therefore, while the data for this site are not equivocal in their determination of a shrinking plume, the data are similarly not equivocal of there being an expanding plume, so a generally stable plume is inferred from this evaluation for this site.

8.0 EXPOSURE PATHWAY EVALUATION

8.1 Overview

This exposure pathway evaluation concludes that all potential exposure pathways except the vapor intrusion pathway for the subject property are either incomplete (e.g. impervious ground cover and/or public water) or are acceptable per Act 2 criteria. Remedial action for the vapor intrusion risk will be implemented as discussed below.

8.2 Soil Direct Contact

The exposure risk to human receptors from potential direct contact with impacted soil is acceptable per Act 2 criteria. All detected constituents in soil that are remaining are all well below non-residential Direct Contact MSCs. Additionally, the asphalt and concrete surfaces and building that are covering the subject property eliminate the potential for direct contact.

8.3 Groundwater Ingestion

The property and the surrounding downgradient area are served by public water provided by the York Water Company. The residential parcels immediately downgradient of the property are potential downgradient exposure points, though each of these properties is expected to be connected to the public water system and no private wells are known or suspected.

Springettsbury Township's land development ordinance requires that properties within 1,000 feet of an existing water main are mandated to connect to the public water system. Moreover, the Township specifies that such properties must connect, which may be construed as a mandatory connection requirement. Additionally, the Township's ordinance requires that private wells within the regulated area must obtain approval from the PADEP to use that well. And finally, Township rules stipulate that a property must be at least 2 acres before a private well can be considered. Refer to Appendix H for copies of the Township's ordinance materials. Officials of Springettsbury Township also reported that they are not aware of any residents in this portion of the Township having a private well.

A well search within one quarter mile of the subject property was conducted using the Pennsylvania Groundwater Information System (PaGWIS). Results are included in Appendix H. Twenty four wells are cited in the PaGWIS inventory within the specified radius. These wells are consistently identified as monitoring wells, and three of the wells cited in the inventory are physically located on the subject property. No water supply wells for consumptive purposes are identified in the PaGWIS inventory.

It is probable and reasonable to assume that once public water serves a property, it will continue to do so in the future; therefore, there is limited risk of future domestic supply wells being installed. Space limitations additionally diminish the likelihood for a well to be drilled on these relatively small (less than 2-acre) properties. In consideration of the requirement to connect to the public water service and effective absence of any downgradient properties being greater than 2 acres, the groundwater ingestion pathway is an incomplete pathway.

8.4 Surface Water

An unnamed tributary of Mill Creek is located approximately 1,100 feet the north of the subject property. This waterway is categorized as a warm water fisheries and is likely to be heavily influenced by urban run-off. Beside the influence of stormwater run-off, the volume of groundwater draining this broad valley, when mixed with the groundwater from the subject property, will result in all but undetectable levels of VOCs in the unnamed tributary.

8.5 Vapor Intrusion

Site specific soil gas testing was performed to assess the potential for VOCs of the subject property to impact indoor air quality of the commercial building on the subject property or the residential properties located downgradient of the site, i.e. to the north and west. The potential vapor intrusion exposure pathway for receptors that are not located on the subject property is acceptable per Act 2 criteria, based on evaluation of soil gas analytical results from two sampling events. The guidance referenced is the *Land Recycling Program Technical Guidance Manual-Section IV.A.4. - Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standard*. However, the exposure for occupants of the site building exceeds recommended levels, at least at certain times of the year. Some form of remedial measure will be required to mitigate this exposure, and that remedial measured is proposed to be a sub-slab depressurization system, either retrofitted into the existing building or integrated into any new building(s) that may be constructed onsite in the future. An environmental covenant (institutional control) is proposed to be added to the subject property's deed to augment the effectiveness of this engineering control, as discussed later herein.

8.6 Ecological Receptors

No potential impacts to ecological receptors are expected. Potential ecological exposure to soil or fill impacts is eliminated by the presence of building and associated development of the project locality. Surface water fate and transport analysis in Sections 8.4 demonstrated that potential groundwater discharge to surface water is acceptable per Act 2 criteria. A search of the Pennsylvania Natural Diversity Inventory (PNDI) records concluded no known impacts to threatened and endangered species and/or special concern species and resources within the project area, and indicated "No Further Review Required". The presence of obvious pathway elimination and the acceptable exposure scenarios for potential ecological receptors demonstrates that the risk of potential impact to ecological receptors is acceptable per Act 2 criteria.

9.0 PROPOSED REMEDY

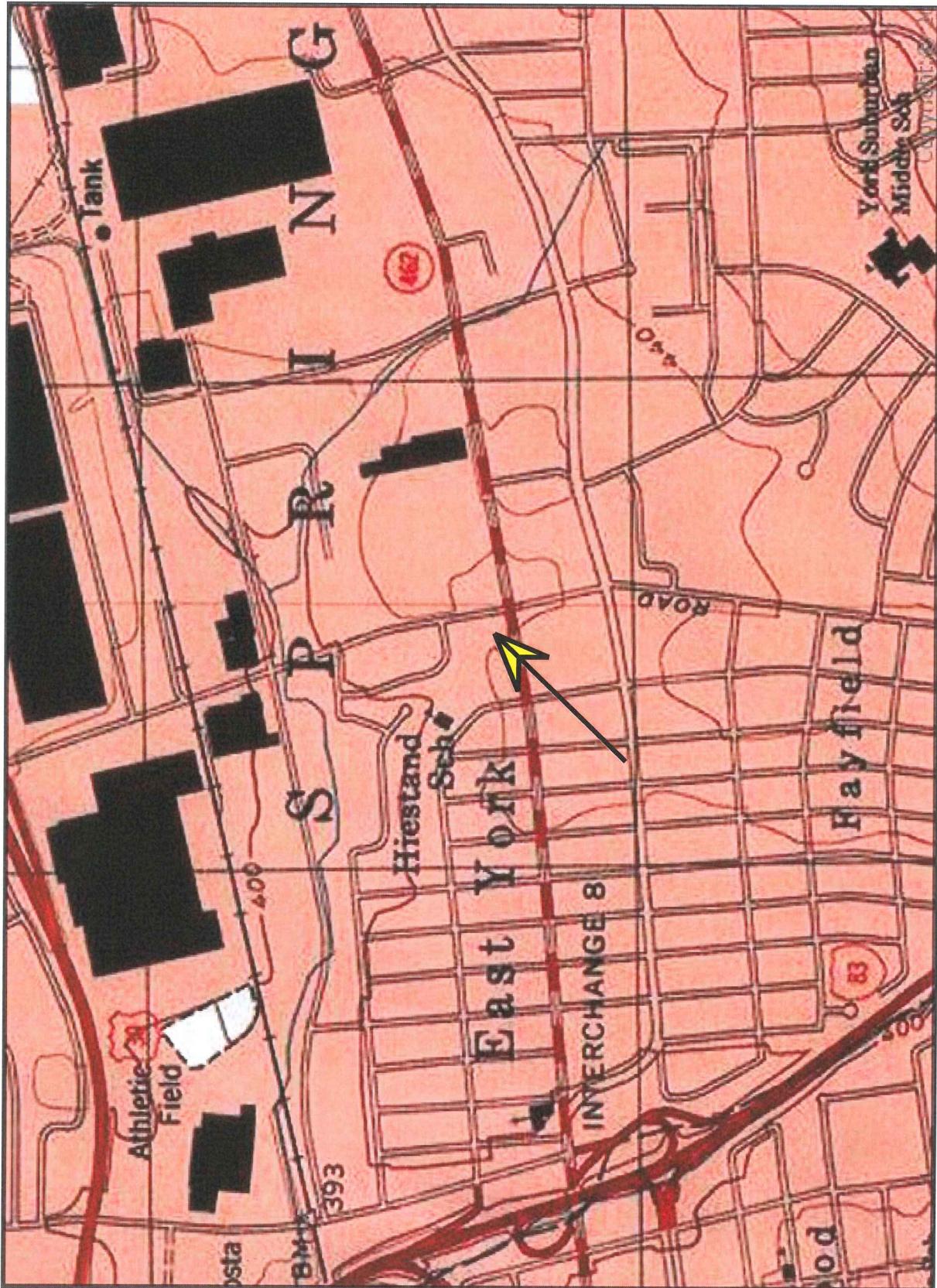
The site characterization data presented in this RIR provide a technical framework to support attainment of a combination of Statewide Health and Site Specific Standards for the subject property. Soils of the subject property are proposed to attain the Statewide Health Standard for the three VOCs that have been detected in site soils, namely cis-1,2-dichloroethene and TCE. Soils are proposed to attain a Site Specific Standard for PCE as a result of PCE exceeding its soil-to-groundwater MSC at the location of SSM's soil boring SB-12. Groundwater of the subject property is proposed to attain a Site Specific Standard for chloroethane, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, methyl-tert-butyl-ether, PCE, TCE, and vinyl chloride. In each case, the remedy is proposed for non-residential land uses.

The subject property is currently in commercial use, and based on existing zoning, future approved uses of the property are restricted to commercial use¹. Notwithstanding the zoning controls, the future uses of the subject property will be limited to non-residential type uses.

The proposed remedy will rely on engineering and institutional controls to achieve the proposed Site Specific Standard. The engineering controls consist of the impervious surfaces (asphalt and concrete) and the building that currently covers the subject property, an incomplete pathway for groundwater exposure, and a sub-slab depressurization system for the building's lower level. Institutional controls proposed for the subject property consist of an environmental covenant, which will restrict future land use to non-residential activities, restrict access to groundwater, dictate that a sub-slab depressurization system be maintained, and govern how the site area is to be managed in the event of soils excavation at the location of the loading dock. A draft of the environmental covenant is included as Appendix I. The owner seeks the PADEP's concurrence of these remedies and a release of liability as available through Act 2.

¹ Springettsbury Township currently zones the subject property for non-residential uses only.

FIGURES



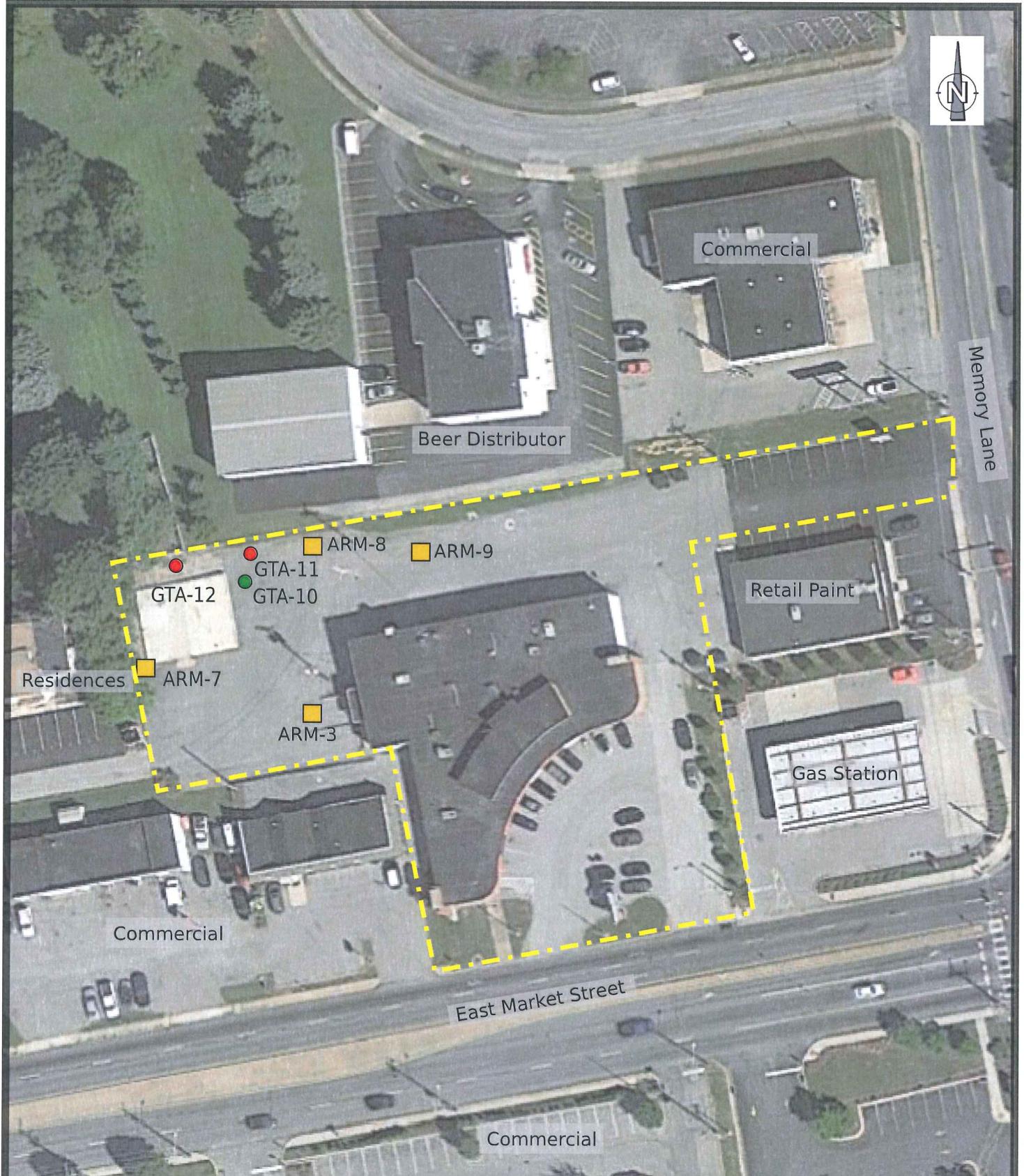
Plaza 2331 Commercial Property
2331 East Market Street
City of York, PA

FIG. 1 SITE LOCATION MAP


**Independence
Environmental
Consulting, LLC**
www.IndependenceEnv.com

PROJECT No.
0126.001.15

DATE
APRIL 29, 2016



<p>Plaza 2331 Commercial Property 2331 East Market Street City of York, PA</p> <p>FIG. 2 SITE LAYOUT & WELL LOCATION MAP</p>	<ul style="list-style-type: none"> ● GTA SHALLOW WELL LOCATION & ID ● GTA DEEP WELL LOCATION & ID ■ ARM WELL LOCATION AND ID 	<p>Independence Environmental Consulting, LLC www.IndependenceEnv.com</p>
		<p>PROJECT No. 0126.001.16</p> <p>DATE APRIL 29, 2016</p>





Plaza 2331 Commercial Property
2331 East Market Street
City of York, PA

FIG. 3 GROUNDWATER FLOW MAP
DECEMBER 30, 2015

- GTA SHALLOW WELL LOCATION & ID
- GTA DEEP WELL LOCATION & ID
- ARM WELL LOCATION & ID

407.70 GROUNDWATER ELEVATION IN FEET ASL
(407.59) ELEVATION NOT CONTOURED FROM THIS PIEZOMETER WELL
← DIRECTION OF GROUNDWATER FLOW

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Plaza 2331 Commercial Property
2331 East Market Street
City of York, PA

FIG. 4 PCE & TCE CONCENTRATIONS
IN GROUNDWATER, DEC. 30, 2015

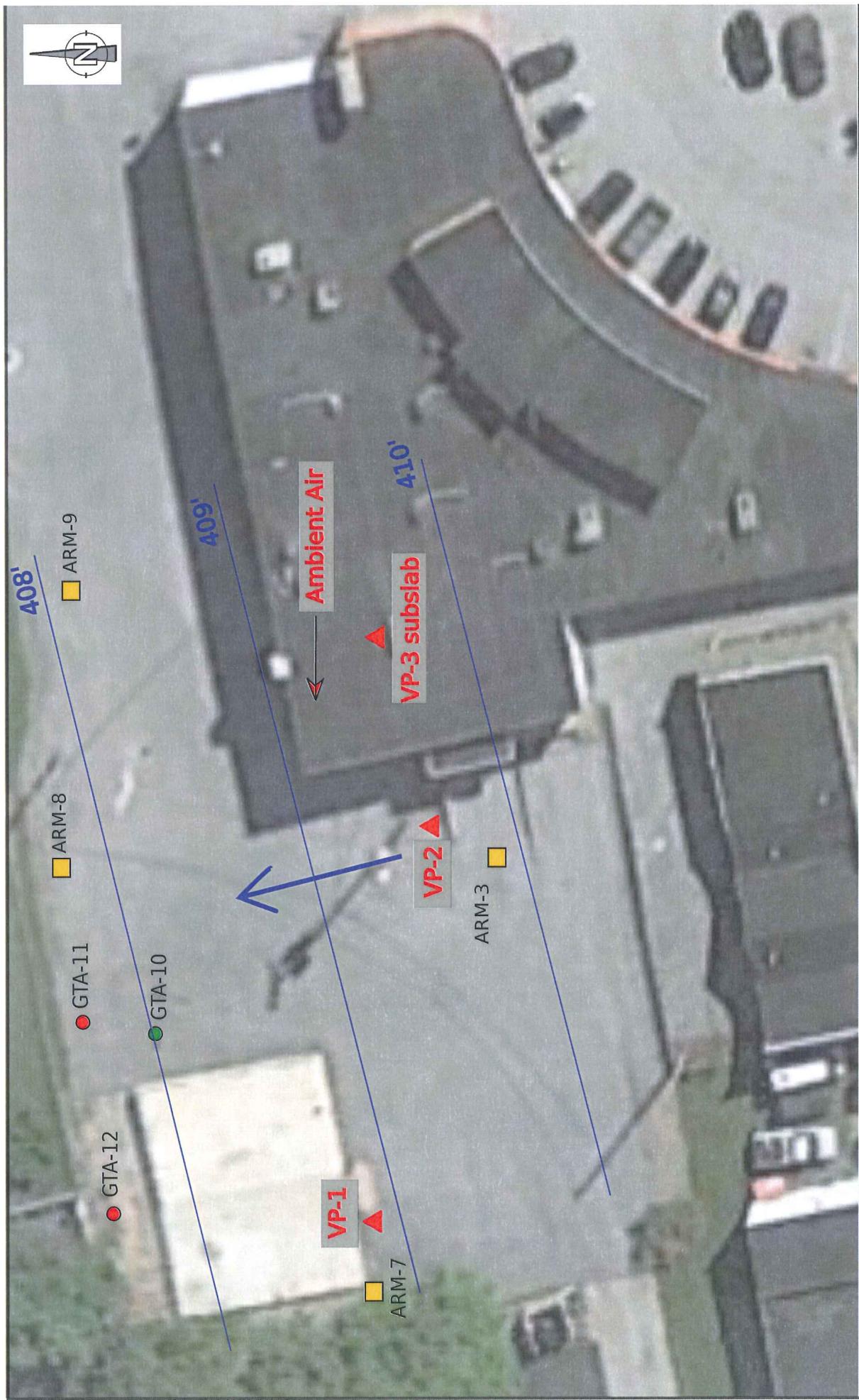
- GTA-12 (PCE 870, TCE 182)
- ARM-3 (PCE 9000, TCE 1100)
- ARM-7 (PCE 1220, TCE 141)
- ARM-8 (PCE 31.4, TCE 2.5)
- ARM-9 (PCE 16, TCE ND)

WELL LOCATION ID.
PCE (870) AND TCE (182) CONCENTRATIONS
IN MICROGRAMS/LITER

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0126.001.15 APRIL 29, 2016



Plaza 2331 Commercial Property
2331 East Market Street
City of York, PA

FIG. 5 Soil Gas and
Ambient Air Sample Locations

▲ Vapor Point collection site & ID
VP-1

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TABLES

Table 1 - Summary of Groundwater Analytical Data
 Plaza 2331 Property
 2331 East Market St. York County, PA

GTA-10									
Analyte	Units	6/19/2013	11/13/2013	12/4/2014	3/13/2015	5/22/2015	8/28/2015	12/30/2015	PADEP Act 2 MSC _{GW-used}
VOCs									
Chloroethane	µg/L	n/a	n/a	---	---	---	---	---	900
1,2-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,3-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,1-Dichloroethene	µg/L	n/a	n/a	1.9	---	---	1.1	---	7
cis-1,2-Dichloroethene	µg/L	n/a	n/a	161	346	414	347	320	70
trans-1,2-Dichloroethene	µg/L	n/a	n/a	---	---	---	---	---	100
Trichloroethene	µg/L	n/a	n/a	119	19.1	---	---	120	5
Tetrachloroethene	µg/L	n/a	n/a	73.9	12.4	---	---	90.5	5
Methyl t-Butyl Ether	µg/L	n/a	n/a	2.6	---	---	---	---	20
Vinyl Chloride	µg/L	n/a	n/a	40.8	8.6	10.5	16.6	41.1	2
Other VOCs	µg/L	n/a	n/a	---	---	---	---	---	Varies

GTA-11									
Analyte	Units	6/19/2013	11/13/2013	12/4/2014	3/13/2015	5/22/2015	8/28/2015	12/30/2015	PADEP Act 2 MSC _{GW-used}
VOCs									
Chloroethane	µg/L	n/a	n/a	---	---	---	---	---	900
1,2-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,3-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,1-Dichloroethene	µg/L	n/a	n/a	---	---	---	---	---	7
cis-1,2-Dichloroethene	µg/L	n/a	n/a	187	196	669	425	635	70
trans-1,2-Dichloroethene	µg/L	n/a	n/a	---	---	---	5.6	4.0	100
Trichloroethene	µg/L	n/a	n/a	80.2	94.5	23.3	155	25.8	5
Tetrachloroethene	µg/L	n/a	n/a	494	1110	53.9	1930	295	5
Methyl t-Butyl Ether	µg/L	n/a	n/a	---	---	---	---	---	20
Vinyl Chloride	µg/L	n/a	n/a	2.5	---	---	4.5	20.5	2
Other VOCs	µg/L	n/a	n/a	---	---	---	---	---	Varies

GTA-12									
Analyte	Units	6/19/2013	11/13/2013	12/4/2014	3/13/2015	5/22/2015	8/28/2015	12/30/2015	PADEP Act 2 MSC _{GW-used}
VOCs									
Chloroethane	µg/L	n/a	n/a	1	---	---	1.9	---	900
1,2-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,3-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,1-Dichloroethene	µg/L	n/a	n/a	---	---	---	---	---	7
cis-1,2-Dichloroethene	µg/L	n/a	n/a	181	95.2	217	261	282	70
trans-1,2-Dichloroethene	µg/L	n/a	n/a	2.3	---	---	1.5	9.9	100
Trichloroethene	µg/L	n/a	n/a	---	58.8	138	165	182	5
Tetrachloroethene	µg/L	n/a	n/a	625	299	603	478	870	5
Methyl t-Butyl Ether	µg/L	n/a	n/a	---	---	---	---	---	20
Vinyl Chloride	µg/L	n/a	n/a	1.1	---	---	13.6	11.1	2
Other VOCs	µg/L	n/a	n/a	---	---	---	---	---	Varies

Table 1 - Summary of Groundwater Analytical Data
 Plaza 2331 Property
 2331 East Market St. York County, PA

Table 1 - Summary of Groundwater Analytical Data
 Plaza 2331 Property
 2331 East Market St. York County, PA

ARM-9									
Analyte	Units	6/19/2013	11/13/2013	12/4/2014	3/13/2015	5/22/2015	8/28/2015	12/30/2015	PADEP Act 2 MSC _{GW-used}
VOCs									
Chloroethane	µg/L	---	---	---	---	---	---	---	900
1,2-Dichlorobenzene	µg/L	---	---	1.7	---	---	---	---	600
1,3-Dichlorobenzene	µg/L	---	---	1.2	---	---	---	---	600
1,1-Dichloroethene	µg/L	---	---	---	---	---	---	---	7
cis-1,2-Dichloroethene	µg/L	---	7.2	---	3.7	---	2.0	---	70
trans-1,2-Dichloroethene	µg/L	---	---	---	---	---	---	---	100
Trichloroethene	µg/L	---	4.9	1.3	1.1	---	2.0	---	5
Tetrachloroethene	µg/L	10.1	57	25.4	10.1	13.3	22.6	16	5
Methyl t-Butyl Ether	µg/L	n/a	---	---	---	---	---	---	20
Vinyl Chloride	µg/L	---	---	---	---	---	---	---	2
Other VOCs	µg/L	---	---	---	---	---	---	---	Varies

Notes:

µg/L = micrograms per liter

n/a = Not analyzed

--- = Not detected at or above the laboratory's reporting limit

2013 Analytical Data provided by an undated summary table titled "Summary of Groundwater Sample Analytical Results" by ARM Group, Inc.

PADEP Act 2 MSCGW-used = Pennsylvania Department of Environmental Protection Act 2 Medium-Specific Concentration for groundwater in used non-residential aquifers.

Table 2: Soil Gas Analytical Data
 Plaza 2331 Property
 2331 East Market St., York County, PA

Volatile Organic Compounds In Soil Gas/Ambient Air												
Soil Gas Sample ID		Acetone										
		Benzene										
VP-1 Soil Gas												
1/29/2016	13	10	1.9	6.6	3.4	3.6	ND	1.5	ND	23	9.4	9.7
3/4/2016	25	1.1	2.4	ND	74	0.89	ND	3.8	1.8	ND	0.81	ND
VP-2 Soil Gas												
1/29/2016	12	1.9	1.8	ND	4.2	ND	ND	1.6	2.6	1.1	3.0	1.4
3/4/2016	28	1.1	9.5	ND	7.8	ND	ND	3.7	4.6	1.2	1.0	4.6
VP-3 Sub-slab												
1/29/2016	14	7.8	1.9	ND	510	2.7	ND	1.5	11	2.1	5.4	4.5
3/4/2016	15	ND	ND	ND	32000	240	32	ND	ND	ND	ND	ND
Non-Res IAQ MSC ¹	9100000	1100	290000	200000	58000	NS	5000	51000	7300	NS	58000	NS
Indoor Air Sample ID												
VP-3 Ambient Air												
1/29/2016	6.6	0.6	ND	ND	2.8	ND	ND	1.6	ND	0.8	ND	0.8
3/4/2016	29	1.0	2.9	ND	57	ND	ND	3.1	ND	ND	1.2	ND
Non-Res IAQ MSC ²	91000	11	2900	2000	580	NS	50	510	73	NS	580	NS
O/M/P-Xylene												
Vimyl chloride												
1,3,5-Tri methylbenzene												
1,2,4-Tri methylbenzene												
Trichloroethylene												
Tetrachloroethylene												
Toluene												
1,1,1-Trichloroethane												
Methylene chloride												
Isooctane												
Hexane												
4-Ethyltoluene												
Ethylbenzene												
Cis-1,2-dichloroethylene												
Trans-1,2-dichloroethylene												
1,1-Dichloroethylene												
Dichlorodifluoromethane												
2-Butanone												
Carbon disulfide												
Benzene												

Notes and Abbreviations:

All VOC concentrations and standards are reported as micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

Act 2 Indoor Air Quality MSCs are related to Non-Residential conditions for indoor air samples, MSCs from Table 3 of Vapor Intrusion Policy

Bold text indicates that the compound was detected above the laboratory method detection limit.

Shading indicates that the detected concentration is above a Non-Residential Act 2 MSC for Indoor Air Quality.

IAQ - Indoor Air Quality screening criteria for residential sites, from January 24, 2004 guidance document 253-0300-100.

ND - Not detected in the sample at a concentration above the the method detection limit

NS - No Standard available (no Statewide Health Standard MSCs)

Footnote 1. Act 2 Non-Residential IAQ MSCs with 100x transfer factor for soil gas samples

Footnote 2. Act 2 Non-Residential IAQ MSCs

APPENDIX A
2011 Phase I Environmental Site Assessment Report
By SSM Group, Inc.



August 24, 2011

Ms. Tamara Wildasin
Senior Credit Review Officer
Peoples Bank
Cedorus Valley Corporate Center
105 Leader Heights Road
P.O. Box 2887
York, PA 17405-2887

RE: 2331 E. Market Street Phase II Environmental Site Assessment
SSM File 109694.0001

Dear Ms. Wildasin:

On August 12, 2011, SSM Group, Inc. (SSM) initiated a Phase II Environmental Site Assessment of 2331 E. Market Street, York, Pennsylvania. A Phase I Environmental Site Assessment conducted in June 2011 found a recognized environmental condition (REC) as defined by ASTM Standard E-1527-05. The REC was based on the historical use of the subject property for dry cleaning from 1956 to 1977. Dry cleaners have utilized many compounds, to include tetrachloroethene (PCE), a common dry cleaning solvent, that have the potential to adversely impact human health and the environment. This finding identified the need to perform additional environmental testing at the site. This report summarizes the tasks performed, conclusions and recommendations of the Phase II Environmental Site Assessment performed by SSM.

Soil Boring Investigation

On August 12, 2011, SSM oversaw the installation of sixteen (16) soil borings at accessible locations surrounding the existing building. Onsite disposal of dry cleaning waste was the primary concern, as no floor drains were observed in the building. It should be noted that the building was remodeled in the late 1977's, and floor drains may have previously existed in the building; however, there is no evidence of this. Several of the soil boring locations were biased toward windows, doors, and loading docks while others were randomly placed across the property.

Soil borings we installed using a truck mounted Geoprobe® direct push soil probe. Soil cores were logged and field screened utilizing a photoionization detector (PID). Soil boring locations are depicted on Figure 1. Soil boring logs are included in the attachments to this letter. Seventeen soil samples were collected from thirteen borings. In some instances, no samples were collected from a boring due to shallow refusal depths or lack of soil recovery in the sample probe. In other instances, multiple samples were collected from the same boring at different depth intervals. Sample depths were selected based on PID readings, visual observations, olfactory observations, saturated intervals, and other factors.



Ms. Tamara Wildasin | Peoples Bank
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August 24, 2011
Page 2

As per the Scope of Work identified in the contract, ten (10) samples were selected for analysis by TestAmerica analytical laboratories, a Pennsylvania Department of Environmental Protection (PaDEP) certified analytical laboratory. Soil samples were analyzed for common dry cleaning compounds and their associated breakdown products, including 1,1,1-trichloroethane, 1,1-dichlorethane, 2-butanone, chloromethane, cis-1,2-dichlorethane, tetrachloroethene (PCE), trans-1,2-dichloroethene, trichloroethene (TCE), and vinyl chloride.

In addition, based on what appeared to be petroleum impact at SB-5, additional petroleum parameters were requested from the laboratory for samples collected from SB-5, and adjacent soil borings SB-6 and SB-7, at no additional charge. Specifically, analysis for 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, ethylbenzene, isopropylbenzene (cumene), methyl tert-butyl ether (MTBE), naphthalene, and toluene were requested. As no source of petroleum was identified onsite, it is assumed that the source of this petroleum is from an unknown offsite source. While weathered petroleum was apparent in SB-5, detectable concentrations of the petroleum compounds were not identified above the laboratory reporting limit at these locations.

Odors and a slightly elevated PID reading were observed at the soil/bedrock interface at the location of SB-13. Therefore, two samples were collected from this soil boring. The first sample location was from seven feet below ground surface (bgs) where the highest PID reading was observed, and the second from the depth of refusal at 13-feet bgs. Low levels of VOCs were identified by the PID in the adjacent SB-12. Both of these borings were located in front of the loading dock on the west side of the building.

Concentrations of cis-1,2-dichlorethane, tetrachloroethene (PCE), and trichloroethene (TCE), were detected by the analytical laboratory in the SB-12@12' sample and in both the SB-13@7' and SB-13@13' soil samples. In addition, trace levels of tetrachloroethene (PCE) were detected at sample location SB-5@8'. Concentrations of these compounds were compared with the PaDEP Statewide Health Standard Medium Specific Concentration (MSC) for soil at non-residential sites. Only tetrachloroethene (PCE) exceeded the MSC at SB-12@12'. Table 1 below summarizes the detected contaminants identified in SB-5, SB-12, and SB-13. A copy of the full analytical report is included in the attachments to this report.

Ms. Tamara Wildasin | Peoples Bank
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 August 24, 2011
 Page 3

Table 1: Summary of Soil Laboratory Analysis for Samples Containing Detectable Concentrations of Contaminants in ug/kg

Soil Sample Location	cis-1,2-dichlorethane	tetrachloroethene (PCE)	trichloroethene (TCE)
SB-5@8'	ND	3.3	ND
SB-12@12'	360	1100	170
SB-13@7'	270	26	4.8
SB-13@13'	88	220	22
Medium Specific Concentration (MSC)			
	7,000	500	500

Results in **bold** indicate an exceedance of the MSC

ND – not detected above laboratory reporting limit.

MSC – PaDEP Statewide Health Standard Medium Specific Concentration (MSC) for soil at non-residential sites.

Conclusions and Recommendation

Historic operations at the site have impacted soil in the area of the loading dock on the west side of the building. Tetrachloroethene (PCE) concentrations in excess of the PaDEP Statewide Health Standard Medium Specific Concentration for soil at non-residential sites were identified at the soil/bedrock interface at this location. Also, while petroleum impact was suspected at location SB-5, no petroleum contaminants were identified by laboratory analysis.

Additional soil investigation should be conducted to characterize the vertical and horizontal extent of environmental impact in the area of the loading dock. Based on the detection of PCE at SB-5, this may include characterizing soil below the slab of the building. Impact at the soil/bedrock interface (bedrock surface) often requires an investigation of the groundwater to determine if the contaminants have



Ms. Tamara Wildasin | Peoples Bank
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August 24, 2011
Page 4

impacted groundwater below the site. This would include the installation and testing of groundwater monitoring wells. While detected below the applicable MSC, cis-1,2-dichlorethane is listed on the PaDEP list of Contaminants of Potential Indoor Air Concern (COPIACs). As such, the impact to soil may pose a vapor intrusion concern for the structures located near the release, and a soil gas investigation would be prudent.

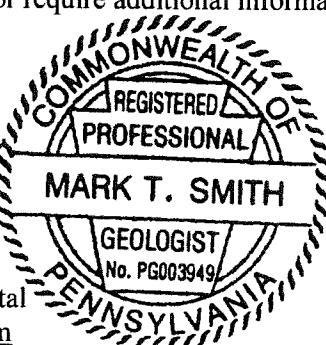
It is the responsibility of the site owner to report the release to PaDEP. PaDEP will likely refer the owner to Pennsylvania's Land Recycling and Remediation Standards Act (Act 2), which outlines the remediation options and requirements necessary to obtain a Release of Environmental Liability, and bring closure to this issue. Active remediation may or may not be required as one remediation option allows impacted soil and/or groundwater to remain in place using engineering controls (i.e., engineered caps, sub-slab depressurization systems, etc.) and institutional controls (i.e., environmental covenants, site activity and use limitations, etc.) to remediate the site under the Act 2 Site Specific Standard using pathway elimination to mitigate risk. SSM can assist with this process.

If you have any questions or require additional information please contact me at 610-621-2000.

Regards,
SSM Group, Inc.

A handwritten signature in black ink that appears to read "Mark T. Smith".

Mark T. Smith, P.G.
Manager, Site Environmental
mark.smith@ssmgroup.com



Attachments

RELEASED FOR
NOT FOR CONSTRUCTION

SSM

FIGURE 1

109694.0001

SOIL BORING LOCATION

LEGEND

©2011 SSM GROUP, INC.

DESIGN BY:

N.B.N.A.

DATE 08/2011

CHG#MS

DESIGN BY:

N.B.N.A.

DATE 08/2011

CHG#MS

PROJECT NUMBER: 2331 EAST MARKET STREET

SSM GROUP, INC.

Engineers and Environmental Scientists

Permitting and Construction Services

Planning and Land Development Services

Environmental Assessment and Monitoring

Geotechnical and Foundation Services

Structural and Civil Engineering Services

Land Surveying and Mapping Services

Environmental Consulting Services

Permitting and Compliance Services

Regulatory Affairs and Permitting Services

Environmental Assessment and Monitoring

Geotechnical and Foundation Services

Structural and Civil Engineering Services

Land Surveying and Mapping Services

Environmental Consulting Services

Permitting and Compliance Services

Regulatory Affairs and Permitting Services

Environmental Assessment and Monitoring

Geotechnical and Foundation Services

Structural and Civil Engineering Services

Land Surveying and Mapping Services

Environmental Consulting Services

Permitting and Compliance Services

Regulatory Affairs and Permitting Services

Environmental Assessment and Monitoring

Geotechnical and Foundation Services

Structural and Civil Engineering Services

Land Surveying and Mapping Services

Environmental Consulting Services

Permitting and Compliance Services

Regulatory Affairs and Permitting Services

Environmental Assessment and Monitoring

Geotechnical and Foundation Services

Structural and Civil Engineering Services

Land Surveying and Mapping Services

Environmental Consulting Services

Permitting and Compliance Services

Regulatory Affairs and Permitting Services

Environmental Assessment and Monitoring

Geotechnical and Foundation Services

Structural and Civil Engineering Services

Land Surveying and Mapping Services

Environmental Consulting Services

Permitting and Compliance Services

Regulatory Affairs and Permitting Services

EAST MARKET STREET (RT. 462)

158.10'

SB-13 @ 7' ANALYTE

RESULT

NON-RESIDENTIAL MSC

CIS 1, 2 DCE

270 ug/kg

7000 ug/kg

PCE

26 ug/kg

500 ug/kg

TCE

4.8 ug/kg

500 ug/kg

SB-13 @ 13' ANALYTE

RESULT

NON-RESIDENTIAL MSC

CIS 1, 2 DCE

88 ug/kg

7000 ug/kg

PCE

220 ug/kg

500 ug/kg

TCE

22 ug/kg

500 ug/kg

SB-12 @ 12' ANALYTE

RESULT

NON-RESIDENTIAL MSC

CIS 1, 2 DCE

360 ug/kg

7000 ug/kg

PCE

1100 ug/kg

500 ug/kg

TCE

170

500 ug/kg

SITE PLAN
NO SCALE

SB-5 @ 8' ANALYTE	RESULT	NON-RESIDENTIAL MSC
PCE	3.3	500 ug/kg

ENTRANCE CUT
TO HISTORIC LINE

SB-6

SB-7

SB-8

SB-9

SB-10

SB-11

SB-12

SB-13

SB-14

SB-15

SB-16

SB-17

SB-18

SB-19

SB-20

SB-21

SB-22

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SB-197

SB-198

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

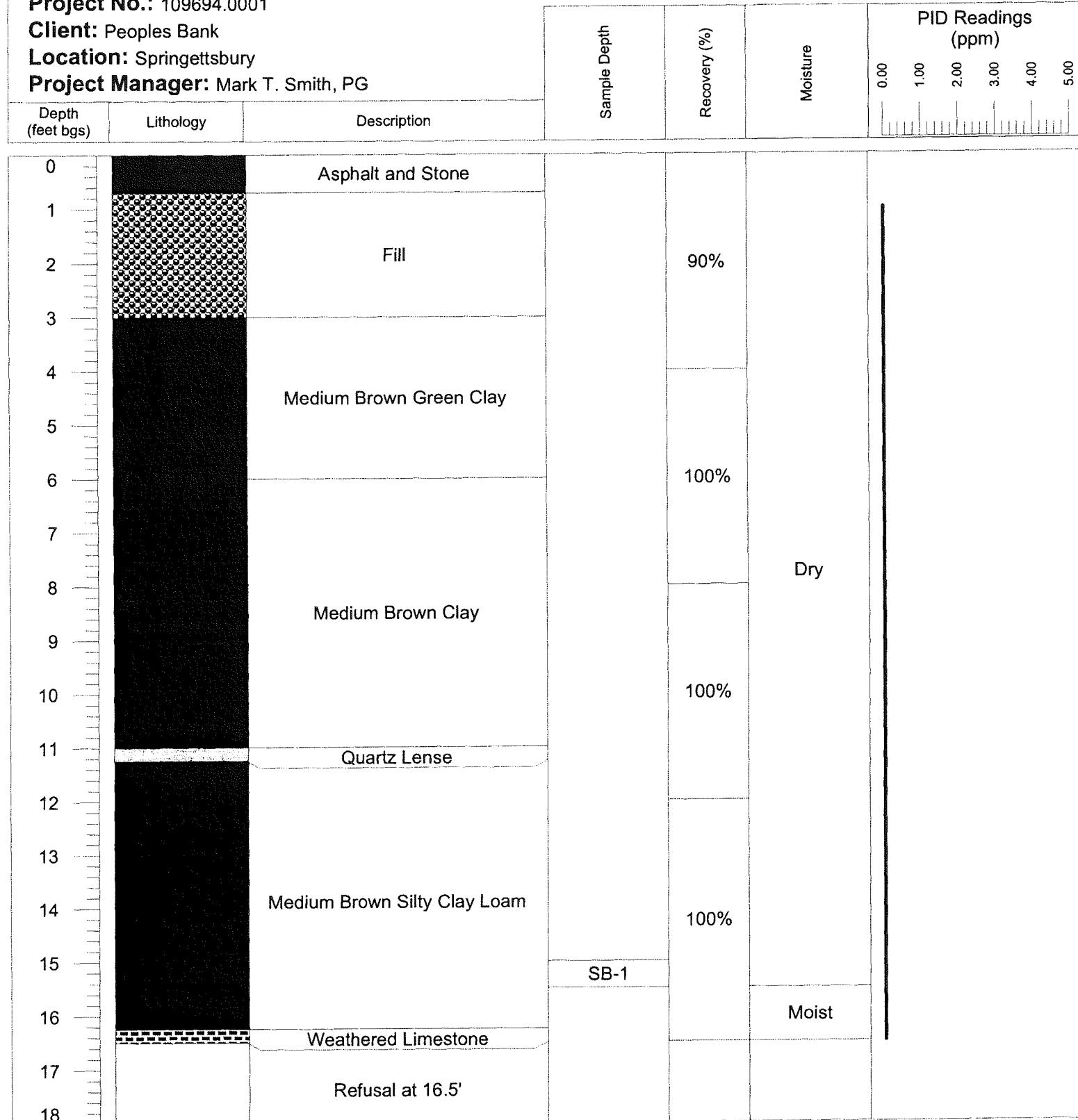
Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-1



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

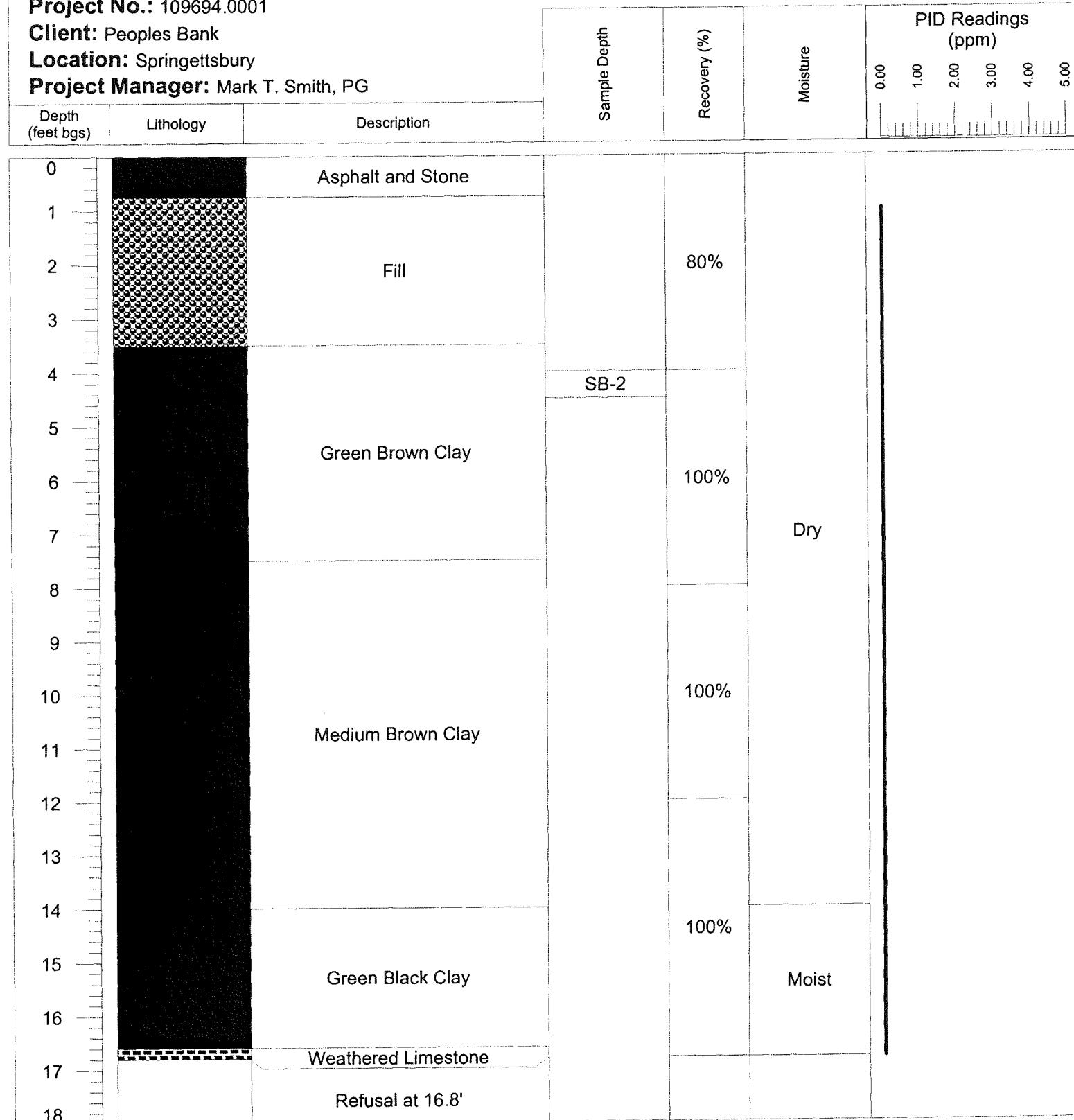
Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-2



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-3

Depth (feet bgs)	Lithology	Description	Sample Depth	Recovery (%)	Moisture	PID Readings (ppm)
						0.00 1.00 2.00 3.00 4.00 5.00
0		Asphalt and Stone				
1				80%		
2					Dry	
3						
4		Medium Brown Clay				
5				60%		
6						
7					Moist	
8						
9						
10		No Recovery		0%		
11						
12		Medium Brown Clay	SB-3	100%	Moist	
13						
14						
15		Refusal at 12.8'				
16						
17						
18						



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

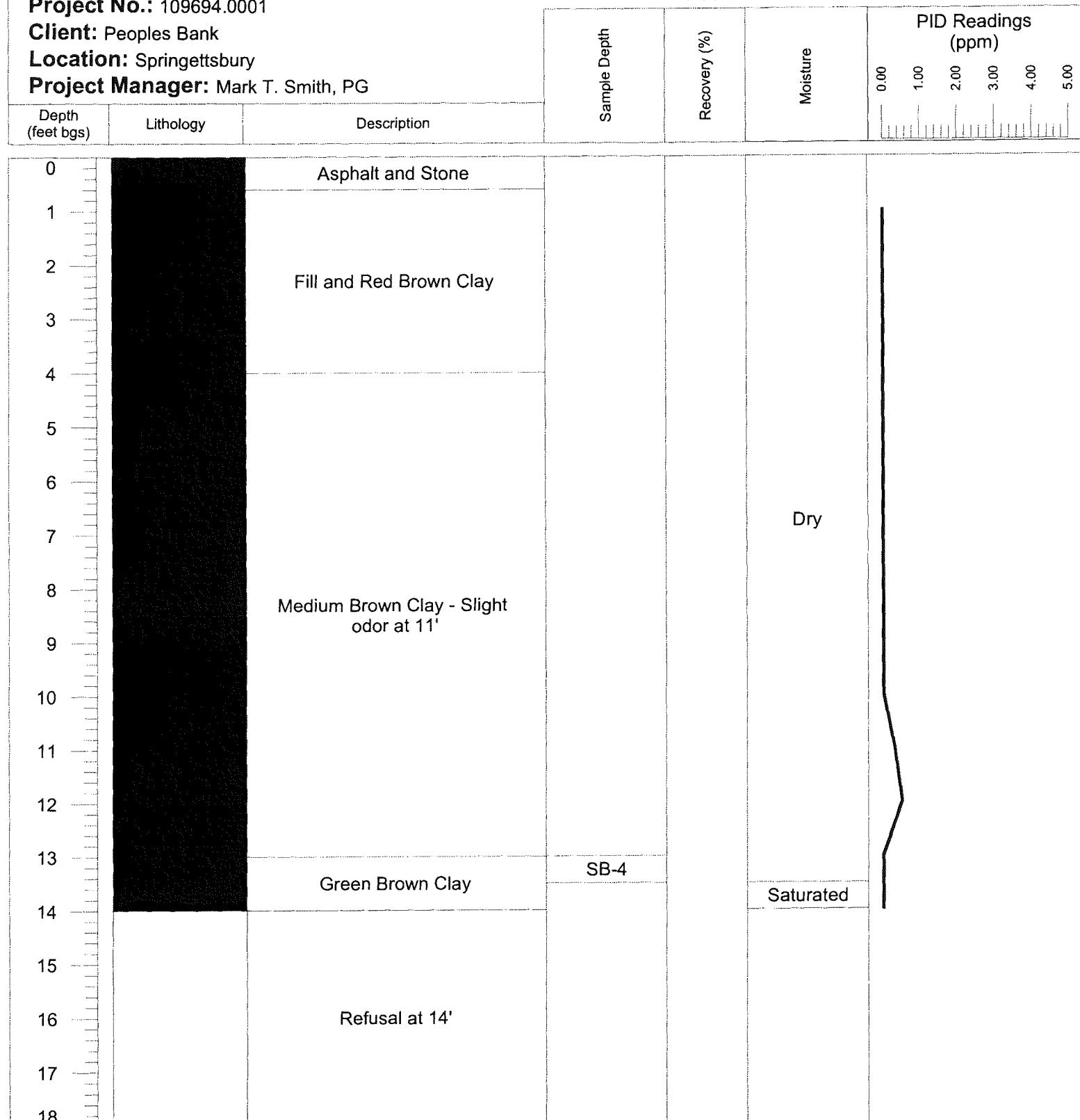
Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-4



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

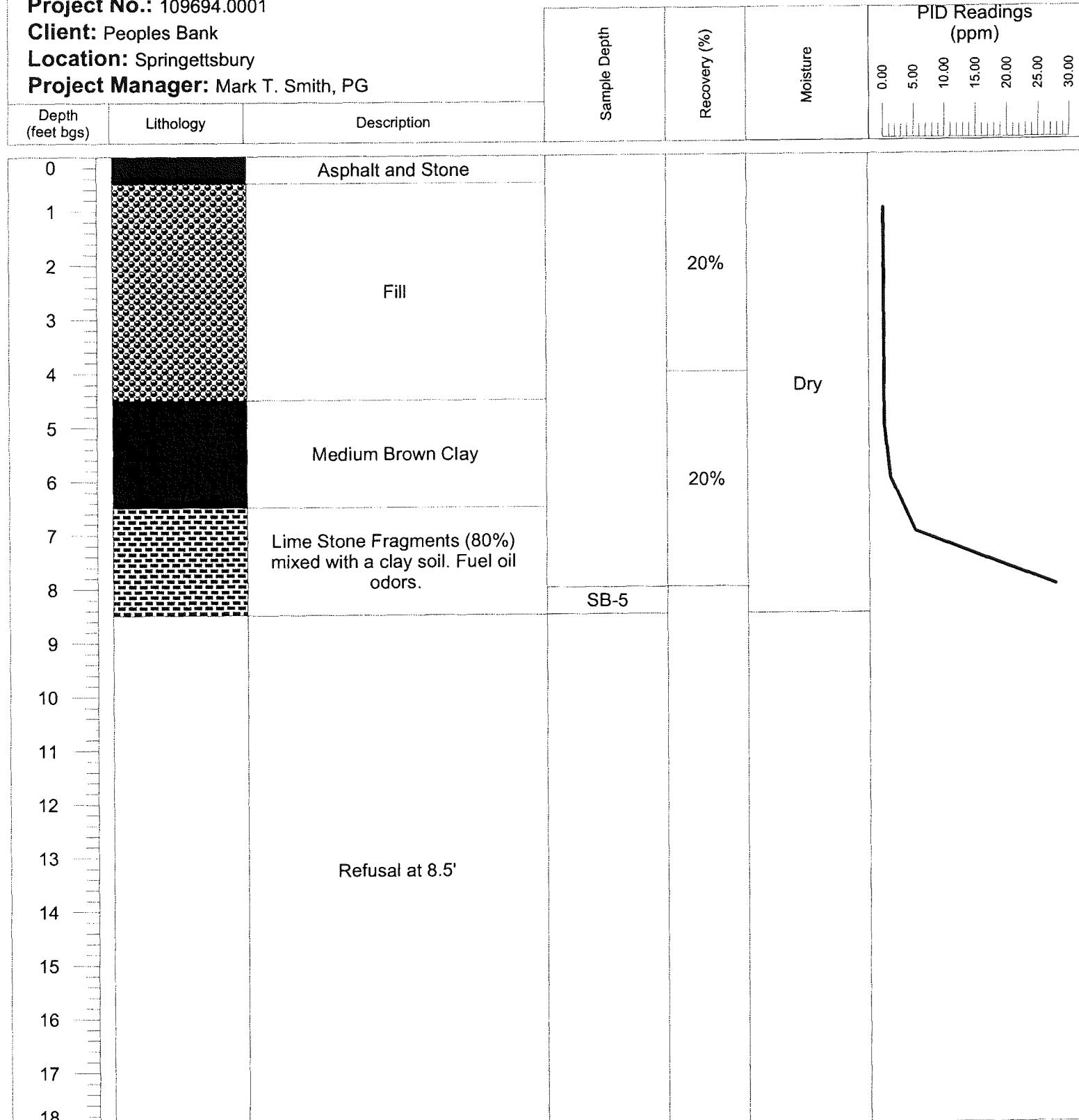
Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-5



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-6

Depth (feet bgs)	Lithology	Description	Sample Depth	Recovery (%)	Moisture	PID Readings (ppm)
						0.00 1.00 2.00 3.00 4.00 5.00
0		Asphalt and Stone				
1		Fill		100%	Dry	
2						
3		Medium Brown Clay				
4						
5				100%		
6		Green Brown Clay	SB-6		Moist	
7						
8						
9						
10						
11						
12		Refusal at 6.5'				
13						
14						
15						
16						
17						
18						

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-7

Depth (feet bgs)	Lithology	Description	Sample Depth	Recovery (%)	Moisture	PID Readings (ppm)
						0.00 1.00 2.00 3.00 4.00 5.00
0		Asphalt and Stone				
1						
2				100%	Dry	
3		Medium Brown Clay				
4		Limestone Bedrock	SB-7	90%	Moist	
5						
6						
7						
8						
9						
10						
11		Refusal at 4.5'				
12						
13						
14						
15						
16						
17						
18						



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

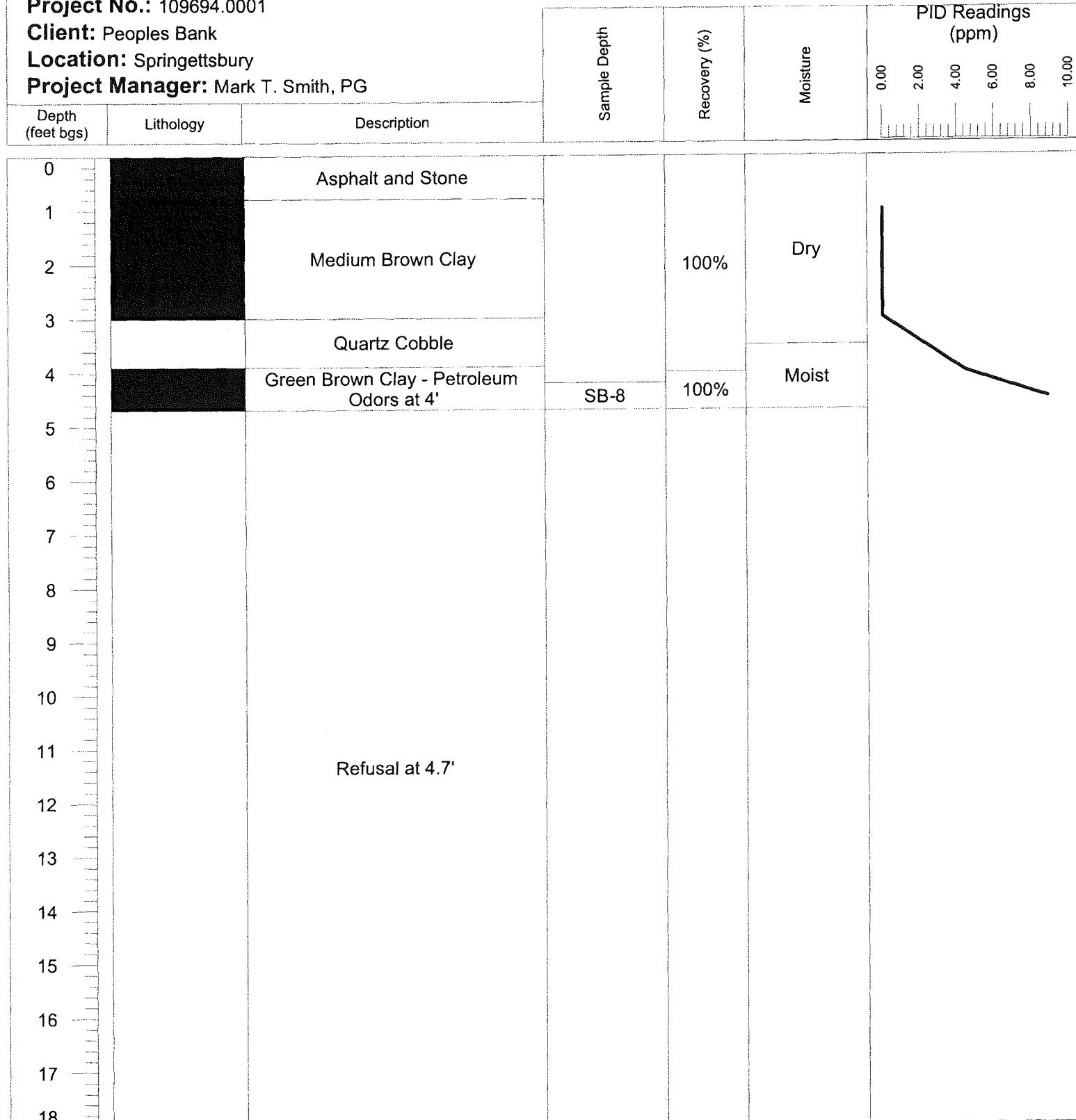
Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-8



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-9

Depth (feet bgs)	Lithology	Description	Sample Depth	Recovery (%)	Moisture	PID Readings (ppm)
						0.00 1.00 2.00 3.00 4.00 5.00
0		Asphalt and Stone				
1						
2		Medium Brown Clay	No Sample	90%		
3						
4		Modified Stone Fill - appeared to be metal beneath the stone fill		10%		
5						
6						
7						
8						
9						
10						
11		Refusal at 5'				
12						
13						
14						
15						
16						
17						
18						



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-10

Depth (feet bgs)	Lithology	Description	Sample Depth	Recovery (%)	Moisture	PID Readings (ppm)	
						0.00 1.00 2.00 3.00 4.00 5.00	
0	Asphalt and Stone						
1	Fill		No Sample	10%			
2							
3							
4							
5							
6							
7							
8							
9							
10	Refusal at 2'						
11							
12							
13							
14							
15							
16							
17							
18							



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

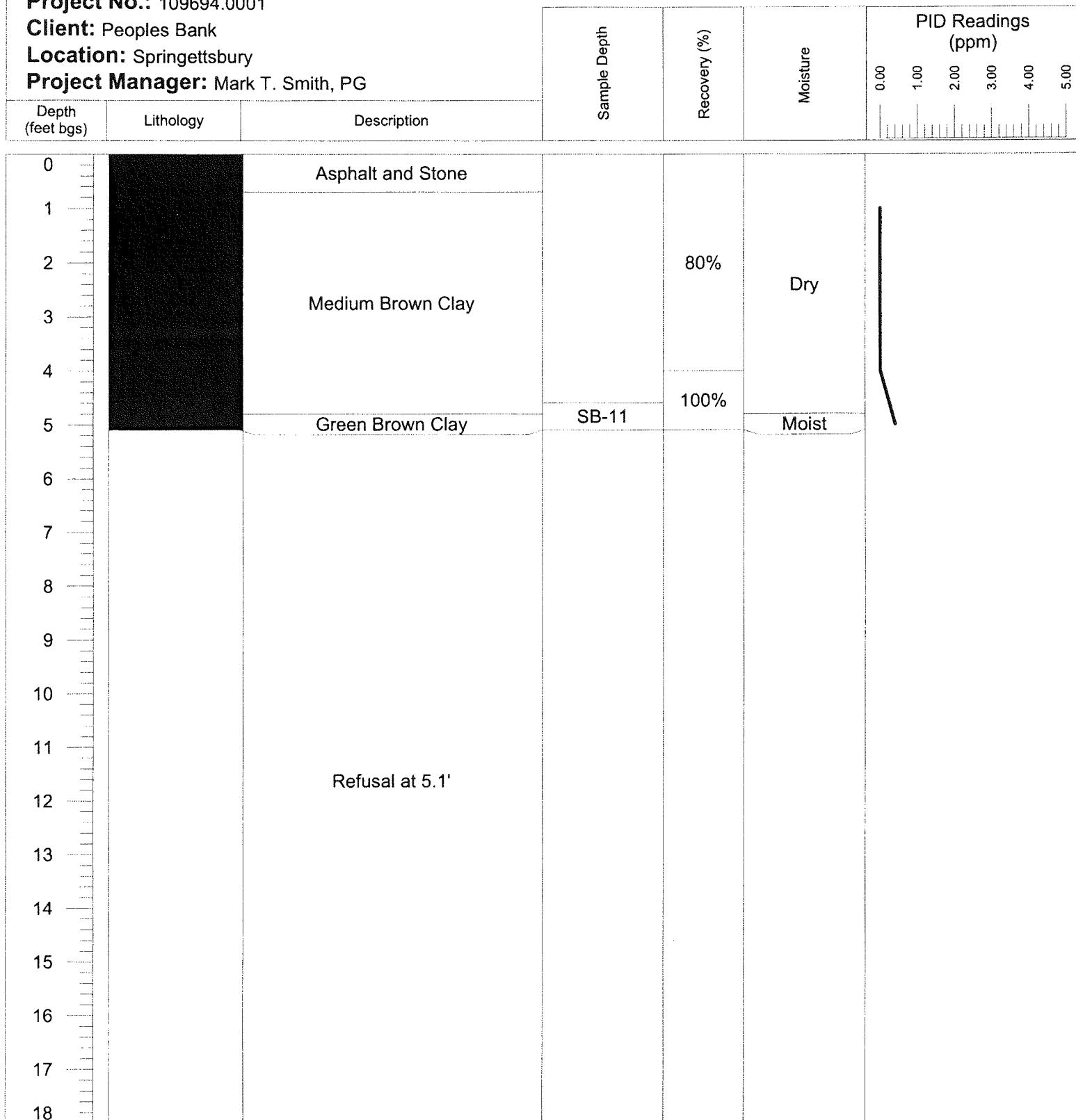
Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-11



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

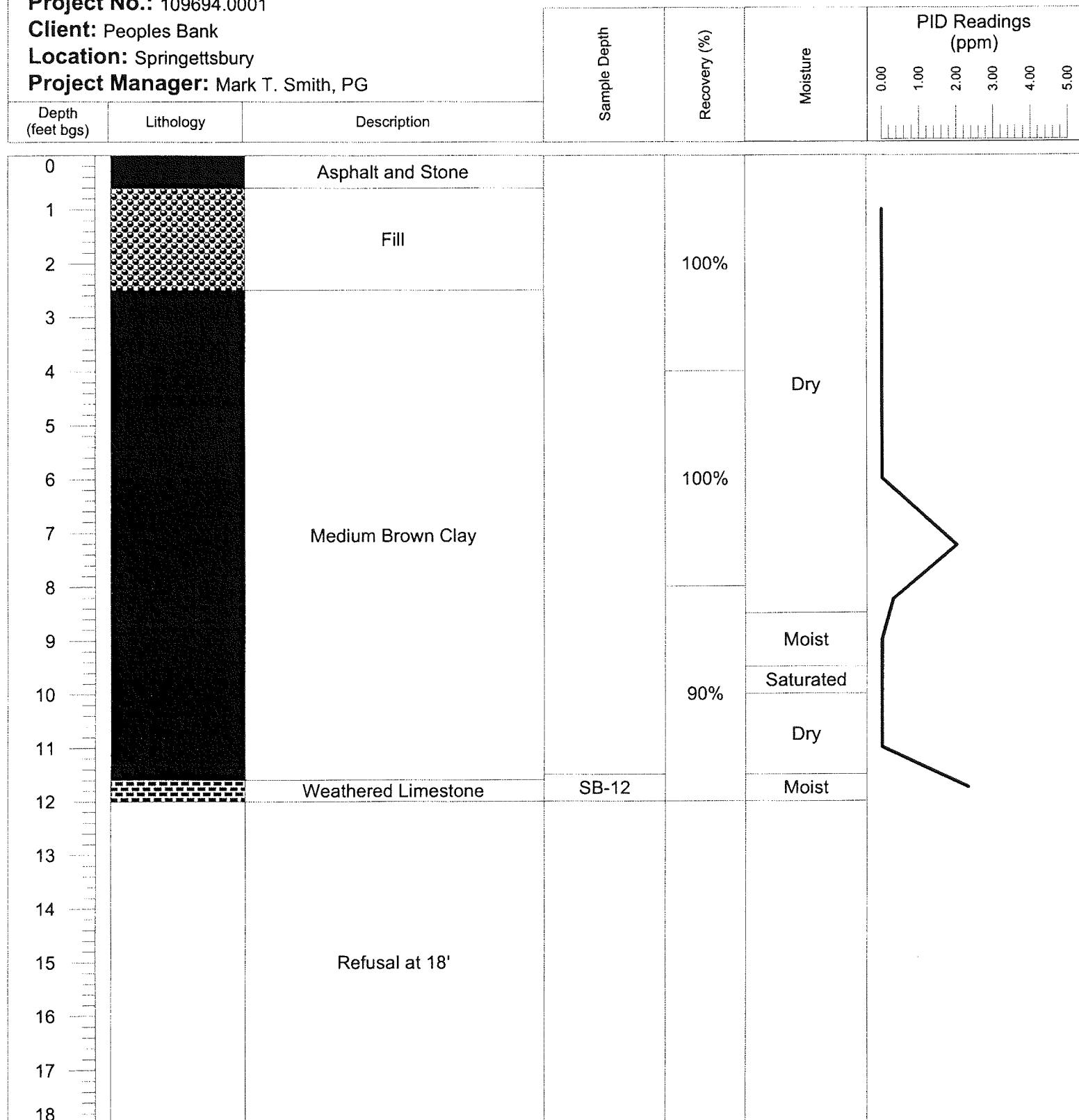
Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-12



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

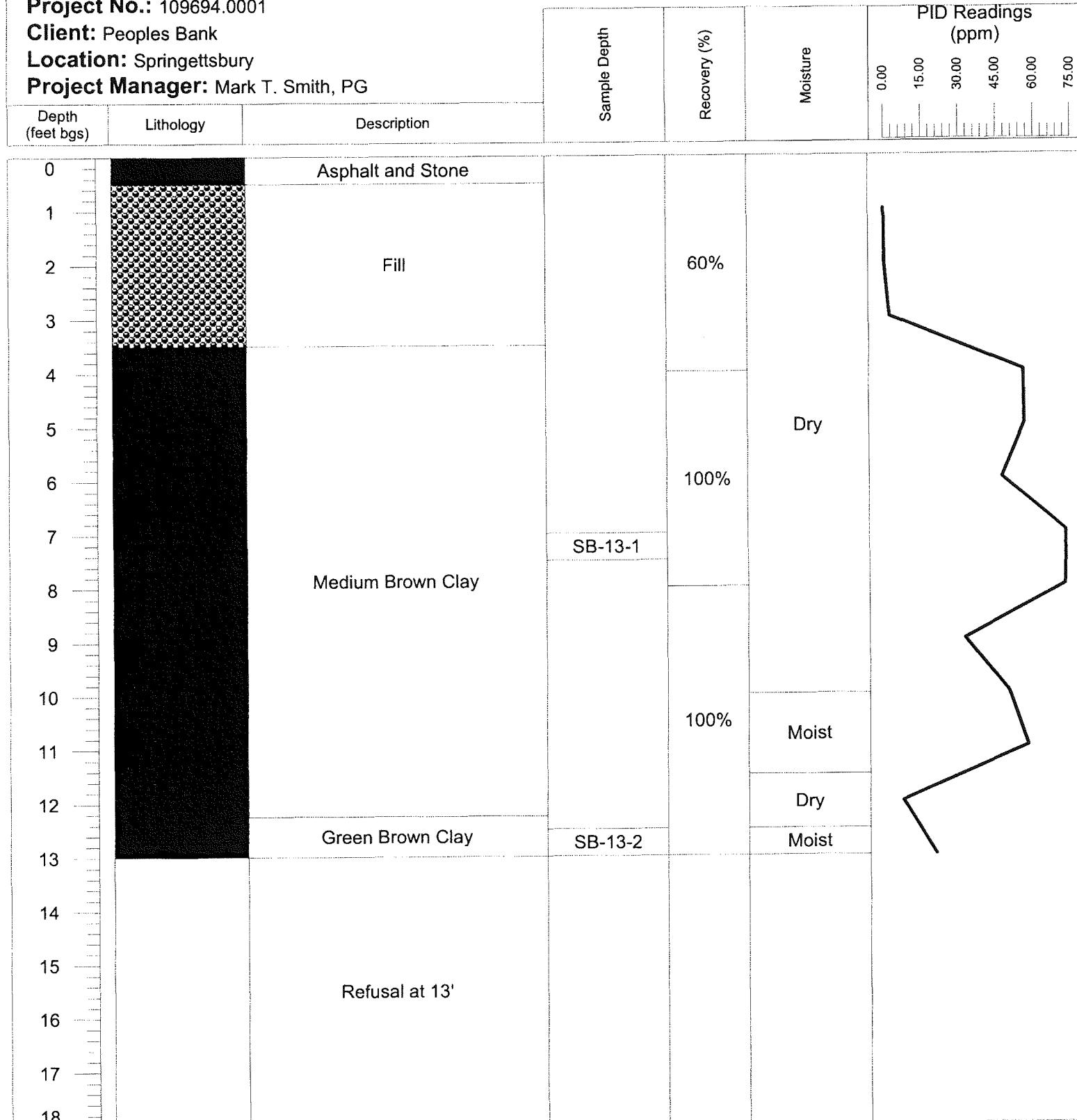
Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-13



Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

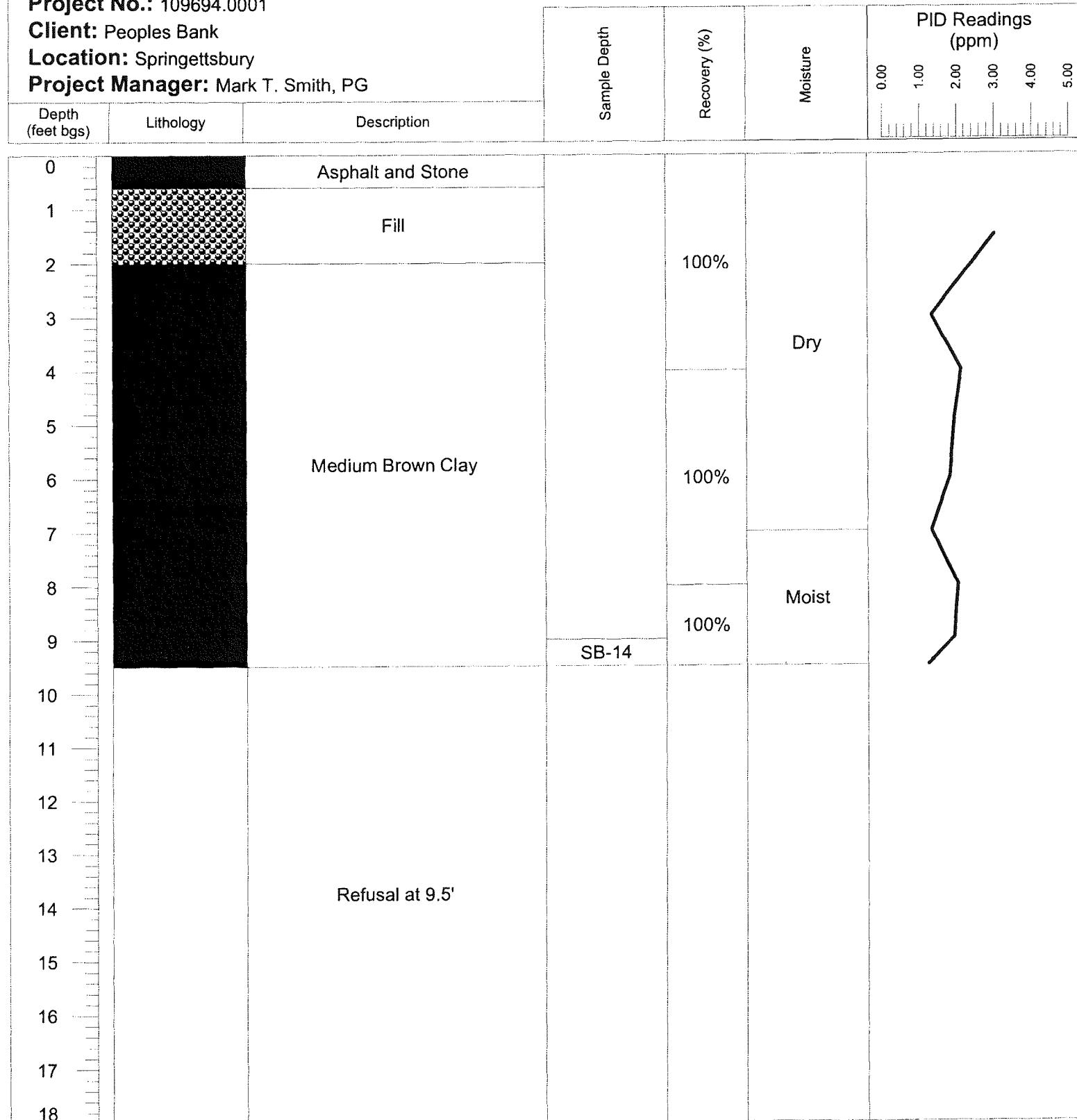
Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-14



Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

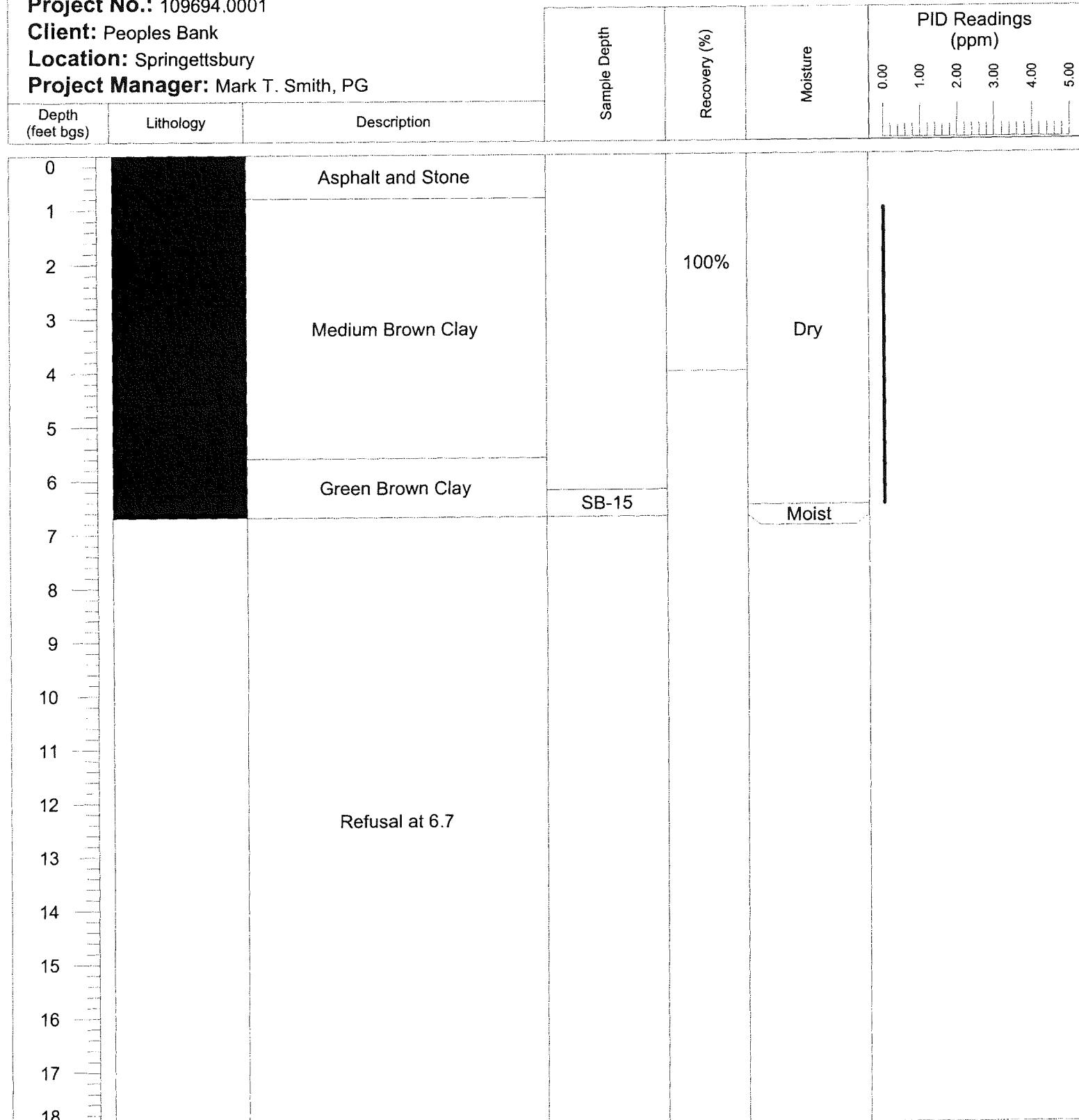
Project No.: 109694.0001

Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-15



Drilling Contractor: Benner Geoservices

Drilling Method: Geoprobe

Drill Date(s): 8/9/11

Hole Size: 2"

Field Specialist: Christine McNeill / Mark T. Smith

Log Checked By: Mark T. Smith, PG

Soil Boring Log

Project: 2331 East Market Street Phase II Soil Investigation

Project No.: 109694.0001

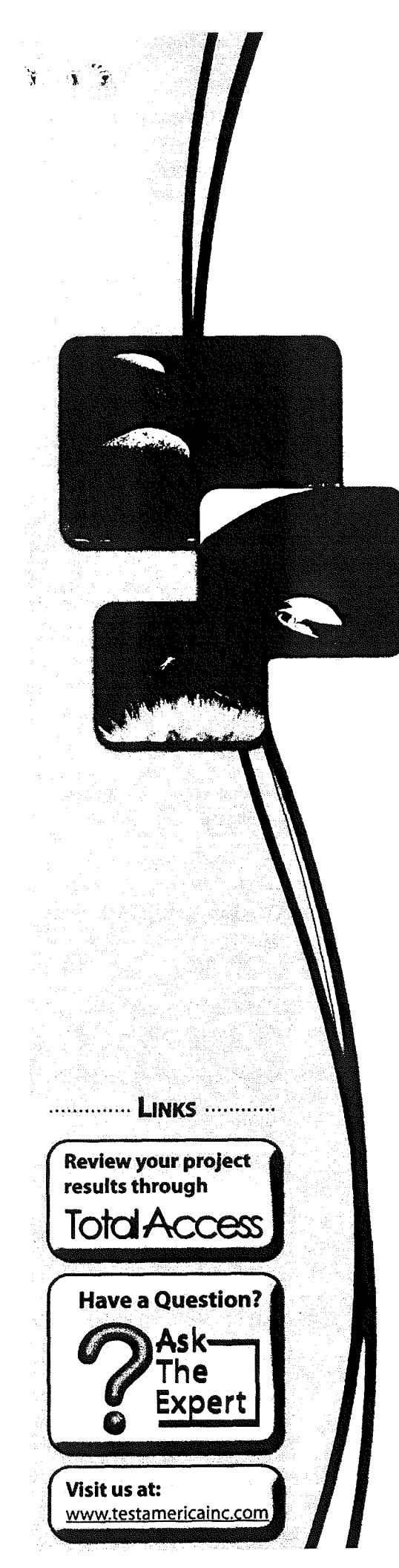
Client: Peoples Bank

Location: Springettsbury

Project Manager: Mark T. Smith, PG

Borehole: SB-16

Depth (feet bgs)	Lithology	Description	Sample Depth	Recovery (%)	Moisture	PID Readings (ppm)				
						0.00	1.00	2.00	3.00	4.00
0		Asphalt and Stone								
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12			SB-16		Moist					
13										
14										
15		Refusal at 12'								
16										
17										
18										



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica King Of Prussia

1008 West Ninth Avenue

King of Prussia, PA 19406

Tel: 610.337.9992

TestAmerica Job ID: KUH0219

Client Project/Site: [none]

Client Project Description: 2331 E. Market

For:

Spotts, Stevens & McCoy

1047 North Park Road, P.O Box 6307

Reading, PA 19610

Attn: Mark Smith

Jill Miller

Authorized for release by:

08/19/2011 12:26:00 PM

Jill Miller

Project Manager

jill.miller@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?

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The
Expert

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Sample Summary

Client: Spotts, Stevens & McCoy

Project/Site: [none]

TestAmerica Job ID: KUH0219

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
KUH0219-07	SB - 5 @ 8'	Soil	08/09/11 10:50	08/10/11 10:30
KUH0219-08	SB - 6 @ 6.5'	Soil	08/09/11 11:10	08/10/11 10:30
KUH0219-09	SB - 7 @ 4.5'	Soil	08/09/11 11:20	08/10/11 10:30
KUH0219-10	SB - 8 @ 4.5'	Soil	08/09/11 11:30	08/10/11 10:30
KUH0219-11	SB - 11 @ 5.1'	Soil	08/09/11 12:05	08/10/11 10:30
KUH0219-12	SB - 12 @ 12'	Soil	08/09/11 12:25	08/10/11 10:30
KUH0219-13	SB - 13 @ 7'	Soil	08/09/11 12:55	08/10/11 10:30
KUH0219-14	SB - 13 @ 13'	Soil	08/09/11 13:05	08/10/11 10:30
KUH0219-15	SB - 14 @ 9.5'	Soil	08/09/11 13:15	08/10/11 10:30
KUH0219-16	SB - 15 @ 6.7'	Soil	08/09/11 13:25	08/10/11 10:30

Definitions/Glossary

Client: Spotts, Stevens & McCoy

Project/Site: [none]

TestAmerica Job ID: KUH0219

Qualifiers

Volatiles

Qualifier	Qualifier Description
RL7	Sample required dilution due to high concentrations of target analyte.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
⊗	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit (Dioxin)
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or method detection limit if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Spotts, Stevens & McCoy
Project/Site: [none]

TestAmerica Job ID: KUH0219

Client Sample ID: SB - 5 @ 8'

Date Collected: 08/09/11 10:50

Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-07

Matrix: Soil

Percent Solids: 80.3

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 5035/8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
1,3,5-Trimethylbenzene	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Benzene	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Ethylbenzene	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Isopropylbenzene	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Methyl tert-butyl ether	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Naphthalene	ND		6.4		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Toluene	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Surrogate		% Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Dibromofluoromethane	106			85 - 122			08/12/11 15:28	08/13/11 11:29	1.0
1,2-Dichloroethane-d4	114			85 - 130			08/12/11 15:28	08/13/11 11:29	1.0
Toluene-d8	102			88 - 111			08/12/11 15:28	08/13/11 11:29	1.0
4-Bromofluorobenzene	96.4			83 - 122			08/12/11 15:28	08/13/11 11:29	1.0

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
1,1-Dichloroethene	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
2-Butanone	ND		80		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Chloromethane	ND		8.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
cis-1,2-Dichloroethene	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Tetrachloroethene	3.3		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
trans-1,2-Dichloroethene	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Trichloroethene	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Vinyl chloride	ND		3.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 11:29	1.0
Surrogate		% Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Dibromofluoromethane	106			85 - 122			08/12/11 15:28	08/13/11 11:29	1.0
1,2-Dichloroethane-d4	114			85 - 130			08/12/11 15:28	08/13/11 11:29	1.0
Toluene-d8	102			88 - 111			08/12/11 15:28	08/13/11 11:29	1.0
4-Bromofluorobenzene	96.4			83 - 122			08/12/11 15:28	08/13/11 11:29	1.0

Client Sample ID: SB - 6 @ 6.5'

Date Collected: 08/09/11 11:10

Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-08

Matrix: Soil

Percent Solids: 77.1

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 5035/8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
1,3,5-Trimethylbenzene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Benzene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Ethylbenzene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Isopropylbenzene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Methyl tert-butyl ether	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Naphthalene	ND		10		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Toluene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0

Client Sample Results

Client: Spotts, Stevens & McCoy
Project/Site: [none]

TestAmerica Job ID: KUH0219

Client Sample ID: SB - 6 @ 6.5'

Date Collected: 08/09/11 11:10
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-08

Matrix: Soil

Percent Solids: 77.1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	102		85 - 122	08/12/11 15:28	08/13/11 12:00	1.0
1,2-Dichloroethane-d4	116		85 - 130	08/12/11 15:28	08/13/11 12:00	1.0
Toluene-d8	98.8		88 - 111	08/12/11 15:28	08/13/11 12:00	1.0
4-Bromofluorobenzene	104		83 - 122	08/12/11 15:28	08/13/11 12:00	1.0

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
1,1-Dichloroethene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
2-Butanone	ND		130		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Chloromethane	ND		13		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
cis-1,2-Dichloroethene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Tetrachloroethene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
trans-1,2-Dichloroethene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Trichloroethene	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Vinyl chloride	ND		5.2		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:00	1.0
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane	102		85 - 122				08/12/11 15:28	08/13/11 12:00	1.0
1,2-Dichloroethane-d4	116		85 - 130				08/12/11 15:28	08/13/11 12:00	1.0
Toluene-d8	98.8		88 - 111				08/12/11 15:28	08/13/11 12:00	1.0
4-Bromofluorobenzene	104		83 - 122				08/12/11 15:28	08/13/11 12:00	1.0

Client Sample ID: SB - 7 @ 4.5'

Date Collected: 08/09/11 11:20
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-09

Matrix: Soil

Percent Solids: 82.4

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 5035/8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
1,3,5-Trimethylbenzene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Benzene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Ethylbenzene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Isopropylbenzene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Methyl tert-butyl ether	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Naphthalene	ND		8.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Toluene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane	102		85 - 122				08/12/11 15:28	08/13/11 12:30	1.0
1,2-Dichloroethane-d4	106		85 - 130				08/12/11 15:28	08/13/11 12:30	1.0
Toluene-d8	101		88 - 111				08/12/11 15:28	08/13/11 12:30	1.0
4-Bromofluorobenzene	97.5		83 - 122				08/12/11 15:28	08/13/11 12:30	1.0

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
1,1-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
2-Butanone	ND		100		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0

Client Sample Results

Client: Spotts, Stevens & McCoy
Project/Site: [none]

TestAmerica Job ID: KUH0219

Client Sample ID: SB - 7 @ 4.5'

Date Collected: 08/09/11 11:20
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-09

Matrix: Soil

Percent Solids: 82.4

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		10		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
cis-1,2-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Tetrachloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
trans-1,2-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Trichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Vinyl chloride	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 12:30	1.0
Surrogate	% Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Dibromofluoromethane	102			85 - 122			08/12/11 15:28	08/13/11 12:30	1.0
1,2-Dichloroethane-d4	106			85 - 130			08/12/11 15:28	08/13/11 12:30	1.0
Toluene-d8	101			88 - 111			08/12/11 15:28	08/13/11 12:30	1.0
4-Bromofluorobenzene	97.5			83 - 122			08/12/11 15:28	08/13/11 12:30	1.0

Client Sample ID: SB - 8 @ 4.5'

Date Collected: 08/09/11 11:30
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-10

Matrix: Soil

Percent Solids: 82.1

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 5035/8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
1,3,5-Trimethylbenzene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Benzene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Ethylbenzene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Isopropylbenzene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Methyl tert-butyl ether	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Naphthalene	ND		8.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Toluene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Surrogate	% Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Dibromofluoromethane	98.8			83 - 122			08/12/11 15:28	08/13/11 13:01	1.0
1,2-Dichloroethane-d4	104			85 - 130			08/12/11 15:28	08/13/11 13:01	1.0
Toluene-d8	99.3			88 - 111			08/12/11 15:28	08/13/11 13:01	1.0
4-Bromofluorobenzene	105			83 - 122			08/12/11 15:28	08/13/11 13:01	1.0

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
1,1-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
2-Butanone	ND		100		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Chloromethane	ND		10		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
cis-1,2-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Tetrachloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
trans-1,2-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Trichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Vinyl chloride	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:01	1.0
Surrogate	% Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Dibromofluoromethane	98.8			85 - 122			08/12/11 15:28	08/13/11 13:01	1.0
1,2-Dichloroethane-d4	104			85 - 130			08/12/11 15:28	08/13/11 13:01	1.0

Client Sample Results

Client: Spotts, Stevens & McCoy
Project/Site: [none]

TestAmerica Job ID: KUH0219

Client Sample ID: SB - 8 @ 4.5'
Date Collected: 08/09/11 11:30
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-10
Matrix: Soil
Percent Solids: 82.1

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8	99.3		88 - 111	08/12/11 15:28	08/13/11 13:01	1.0
4-Bromofluorobenzene	105		83 - 122	08/12/11 15:28	08/13/11 13:01	1.0

Client Sample ID: SB - 11 @ 5.1'
Date Collected: 08/09/11 12:05
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-11
Matrix: Soil
Percent Solids: 80.4

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:32	1.0
1,1-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:32	1.0
2-Butanone	ND		100		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:32	1.0
Chloromethane	ND		10		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:32	1.0
cis-1,2-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:32	1.0
Tetrachloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:32	1.0
trans-1,2-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:32	1.0
Trichloroethene	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:32	1.0
Vinyl chloride	ND		4.0		ug/kg dry	⊗	08/12/11 15:28	08/13/11 13:32	1.0

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	113		85 - 122	08/12/11 15:28	08/13/11 13:32	1.0
1,2-Dichloroethane-d4	123		85 - 130	08/12/11 15:28	08/13/11 13:32	1.0
Toluene-d8	93.2		88 - 111	08/12/11 15:28	08/13/11 13:32	1.0
4-Bromofluorobenzene	93.5		83 - 122	08/12/11 15:28	08/13/11 13:32	1.0

Client Sample ID: SB - 12 @ 12'
Date Collected: 08/09/11 12:25
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-12
Matrix: Soil
Percent Solids: 65.6

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.1		ug/kg dry	⊗	08/12/11 15:28	08/13/11 14:02	1.0
1,1-Dichloroethene	ND		5.1		ug/kg dry	⊗	08/12/11 15:28	08/13/11 14:02	1.0
2-Butanone	ND		130		ug/kg dry	⊗	08/12/11 15:28	08/13/11 14:02	1.0
Chloromethane	ND		13		ug/kg dry	⊗	08/12/11 15:28	08/13/11 14:02	1.0
cis-1,2-Dichloroethene	360		5.1		ug/kg dry	⊗	08/12/11 15:28	08/13/11 14:02	1.0
trans-1,2-Dichloroethene	ND		5.1		ug/kg dry	⊗	08/12/11 15:28	08/13/11 14:02	1.0
Trichloroethene	170		5.1		ug/kg dry	⊗	08/12/11 15:28	08/13/11 14:02	1.0
Vinyl chloride	ND		5.1		ug/kg dry	⊗	08/12/11 15:28	08/13/11 14:02	1.0

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	105		85 - 122	08/12/11 15:28	08/13/11 14:02	1.0
1,2-Dichloroethane-d4	109		85 - 130	08/12/11 15:28	08/13/11 14:02	1.0
Toluene-d8	96.2		88 - 111	08/12/11 15:28	08/13/11 14:02	1.0
4-Bromofluorobenzene	100		83 - 122	08/12/11 15:28	08/13/11 14:02	1.0

Client Sample Results

Client: Spotts, Stevens & McCoy
Project/Site: [none]

TestAmerica Job ID: KUH0219

Client Sample ID: SB - 12 @ 12'

Date Collected: 08/09/11 12:25
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-12

Matrix: Soil

Percent Solids: 65.6

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1100	RL7	300		ug/kg dry	*	08/12/11 15:28	08/15/11 15:22	50
Surrogate									
Dibromofluoromethane	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
	95.9	RL7	85 - 122				08/12/11 15:28	08/15/11 15:22	50
1,2-Dichloroethane-d4			85 - 130				08/12/11 15:28	08/15/11 15:22	50
Toluene-d8			88 - 111				08/12/11 15:28	08/15/11 15:22	50
4-Bromofluorobenzene			83 - 122				08/12/11 15:28	08/15/11 15:22	50

Client Sample ID: SB - 13 @ 7'

Date Collected: 08/09/11 12:55
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-13

Matrix: Soil

Percent Solids: 84.2

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0		ug/kg dry	*	08/15/11 11:54	08/15/11 15:52	1.0
1,1-Dichloroethene	ND		4.0		ug/kg dry	*	08/15/11 11:54	08/15/11 15:52	1.0
2-Butanone	ND		100		ug/kg dry	*	08/15/11 11:54	08/15/11 15:52	1.0
Chloromethane	ND		10		ug/kg dry	*	08/15/11 11:54	08/15/11 15:52	1.0
cis-1,2-Dichloroethene	270		4.0		ug/kg dry	*	08/15/11 11:54	08/15/11 15:52	1.0
Tetrachloroethene	26		4.0		ug/kg dry	*	08/15/11 11:54	08/15/11 15:52	1.0
trans-1,2-Dichloroethene	ND		4.0		ug/kg dry	*	08/15/11 11:54	08/15/11 15:52	1.0
Trichloroethene	4.8		4.0		ug/kg dry	*	08/15/11 11:54	08/15/11 15:52	1.0
Vinyl chloride	ND		4.0		ug/kg dry	*	08/15/11 11:54	08/15/11 15:52	1.0
Surrogate									
Dibromofluoromethane	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
	98.9		85 - 122				08/15/11 11:54	08/15/11 15:52	1.0
1,2-Dichloroethane-d4			85 - 130				08/15/11 11:54	08/15/11 15:52	1.0
Toluene-d8			88 - 111				08/15/11 11:54	08/15/11 15:52	1.0
4-Bromofluorobenzene			83 - 122				08/15/11 11:54	08/15/11 15:52	1.0

Client Sample ID: SB - 13 @ 13'

Date Collected: 08/09/11 13:05
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-14

Matrix: Soil

Percent Solids: 79.8

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.1		ug/kg dry	*	08/15/11 11:54	08/15/11 16:23	1.0
1,1-Dichloroethene	ND		4.1		ug/kg dry	*	08/15/11 11:54	08/15/11 16:23	1.0
2-Butanone	ND		100		ug/kg dry	*	08/15/11 11:54	08/15/11 16:23	1.0
Chloromethane	ND		10		ug/kg dry	*	08/15/11 11:54	08/15/11 16:23	1.0
cis-1,2-Dichloroethene	88		4.1		ug/kg dry	*	08/15/11 11:54	08/15/11 16:23	1.0
Tetrachloroethene	220		4.1		ug/kg dry	*	08/15/11 11:54	08/15/11 16:23	1.0
trans-1,2-Dichloroethene	ND		4.1		ug/kg dry	*	08/15/11 11:54	08/15/11 16:23	1.0
Trichloroethene	22		4.1		ug/kg dry	*	08/15/11 11:54	08/15/11 16:23	1.0
Vinyl chloride	ND		4.1		ug/kg dry	*	08/15/11 11:54	08/15/11 16:23	1.0
Surrogate									
Dibromofluoromethane	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
	99.4		85 - 122				08/15/11 11:54	08/15/11 16:23	1.0

Client Sample Results

Client: Spotts, Stevens & McCoy
Project/Site: [none]

TestAmerica Job ID: KUH0219

Client Sample ID: SB - 13 @ 13'

Date Collected: 08/09/11 13:05
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-14

Matrix: Soil

Percent Solids: 79.8

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	105		85 - 130	08/15/11 11:54	08/15/11 16:23	1.0
Toluene-d8	99.6		88 - 111	08/15/11 11:54	08/15/11 16:23	1.0
4-Bromofluorobenzene	104		83 - 122	08/15/11 11:54	08/15/11 16:23	1.0

Client Sample ID: SB - 14 @ 9.5'

Date Collected: 08/09/11 13:15
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-15

Matrix: Soil

Percent Solids: 69.1

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.8		ug/kg dry	⊗	08/15/11 11:54	08/15/11 16:54	1.0
1,1-Dichloroethene	ND		5.8		ug/kg dry	⊗	08/15/11 11:54	08/15/11 16:54	1.0
2-Butanone	ND		140		ug/kg dry	⊗	08/15/11 11:54	08/15/11 16:54	1.0
Chloromethane	ND		14		ug/kg dry	⊗	08/15/11 11:54	08/15/11 16:54	1.0
cis-1,2-Dichloroethene	ND		5.8		ug/kg dry	⊗	08/15/11 11:54	08/15/11 16:54	1.0
Tetrachloroethene	ND		5.8		ug/kg dry	⊗	08/15/11 11:54	08/15/11 16:54	1.0
trans-1,2-Dichloroethene	ND		5.8		ug/kg dry	⊗	08/15/11 11:54	08/15/11 16:54	1.0
Trichloroethene	ND		5.8		ug/kg dry	⊗	08/15/11 11:54	08/15/11 16:54	1.0
Vinyl chloride	ND		5.8		ug/kg dry	⊗	08/15/11 11:54	08/15/11 16:54	1.0
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane	95.5		85 - 122				08/15/11 11:54	08/15/11 16:54	1.0
1,2-Dichloroethane-d4	109		85 - 130				08/15/11 11:54	08/15/11 16:54	1.0
Toluene-d8	102		88 - 111				08/15/11 11:54	08/15/11 16:54	1.0
4-Bromofluorobenzene	97.3		83 - 122				08/15/11 11:54	08/15/11 16:54	1.0

Client Sample ID: SB - 15 @ 6.7'

Date Collected: 08/09/11 13:25
Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-16

Matrix: Soil

Percent Solids: 81

Method: EPA 8260B - Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0		ug/kg dry	⊗	08/15/11 11:54	08/15/11 17:24	1.0
1,1-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/15/11 11:54	08/15/11 17:24	1.0
2-Butanone	ND		100		ug/kg dry	⊗	08/15/11 11:54	08/15/11 17:24	1.0
Chloromethane	ND		10		ug/kg dry	⊗	08/15/11 11:54	08/15/11 17:24	1.0
cis-1,2-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/15/11 11:54	08/15/11 17:24	1.0
Tetrachloroethene	ND		4.0		ug/kg dry	⊗	08/15/11 11:54	08/15/11 17:24	1.0
trans-1,2-Dichloroethene	ND		4.0		ug/kg dry	⊗	08/15/11 11:54	08/15/11 17:24	1.0
Trichloroethene	ND		4.0		ug/kg dry	⊗	08/15/11 11:54	08/15/11 17:24	1.0
Vinyl chloride	ND		4.0		ug/kg dry	⊗	08/15/11 11:54	08/15/11 17:24	1.0
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane	98.7		85 - 122				08/15/11 11:54	08/15/11 17:24	1.0
1,2-Dichloroethane-d4	100		85 - 130				08/15/11 11:54	08/15/11 17:24	1.0
Toluene-d8	100		88 - 111				08/15/11 11:54	08/15/11 17:24	1.0
4-Bromofluorobenzene	97.2		83 - 122				08/15/11 11:54	08/15/11 17:24	1.0

Lab Chronicle

Client: Spotts, Stevens & McCoy
Project/Site: [none]

TestAmerica Job ID: KUH0219

Client Sample ID: SB - 5 @ 8'

Date Collected: 08/09/11 10:50

Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-07

Matrix: Soil

Percent Solids: 80.3

Prep Type	Batch	Batch	Dilution	Batch	Prepared	Analyst	Lab
	Type	Method	Run	Factor	Number	Or Analyzed	
Total	Prep	EPA 5030B (P/T)		0.80	11H0322_P	08/12/11 15:28	JAD
Total	Analysis	EPA 8260B		1.0	11H0322	08/13/11 11:29	JAD
Total	Prep	General Prep WC		1.00	11H0349_P	08/15/11 11:14	PAM
Total	Analysis	EPA 160.3		1.00	11H0349	08/15/11 12:22	PAM

Client Sample ID: SB - 6 @ 6.5'

Date Collected: 08/09/11 11:10

Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-08

Matrix: Soil

Percent Solids: 77.1

Prep Type	Batch	Batch	Dilution	Batch	Prepared	Analyst	Lab
	Type	Method	Run	Factor	Number	Or Analyzed	
Total	Prep	EPA 5030B (P/T)		0.93	11H0322_P	08/12/11 15:28	JAD
Total	Analysis	EPA 8260B		1.0	11H0322	08/13/11 12:00	JAD
Total	Prep	General Prep WC		1.00	11H0349_P	08/15/11 11:14	PAM
Total	Analysis	EPA 160.3		1.00	11H0349	08/15/11 12:22	PAM

Client Sample ID: SB - 7 @ 4.5'

Date Collected: 08/09/11 11:20

Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-09

Matrix: Soil

Percent Solids: 82.4

Prep Type	Batch	Batch	Dilution	Batch	Prepared	Analyst	Lab
	Type	Method	Run	Factor	Number	Or Analyzed	
Total	Prep	EPA 5030B (P/T)		0.95	11H0322_P	08/12/11 15:28	JAD
Total	Analysis	EPA 8260B		1.0	11H0322	08/13/11 12:30	JAD
Total	Prep	General Prep WC		1.00	11H0349_P	08/15/11 11:14	PAM
Total	Analysis	EPA 160.3		1.00	11H0349	08/15/11 12:22	PAM

Client Sample ID: SB - 8 @ 4.5'

Date Collected: 08/09/11 11:30

Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-10

Matrix: Soil

Percent Solids: 82.1

Prep Type	Batch	Batch	Dilution	Batch	Prepared	Analyst	Lab
	Type	Method	Run	Factor	Number	Or Analyzed	
Total	Prep	EPA 5030B (P/T)		0.96	11H0322_P	08/12/11 15:28	JAD
Total	Analysis	EPA 8260B		1.0	11H0322	08/13/11 13:01	JAD
Total	Prep	General Prep WC		1.00	11H0349_P	08/15/11 11:14	PAM
Total	Analysis	EPA 160.3		1.00	11H0349	08/15/11 12:22	PAM

Client Sample ID: SB - 11 @ 5.1'

Date Collected: 08/09/11 12:05

Date Received: 08/10/11 10:30

Lab Sample ID: KUH0219-11

Matrix: Soil

Percent Solids: 80.4

Prep Type	Batch	Batch	Dilution	Batch	Prepared	Analyst	Lab
	Type	Method	Run	Factor	Number	Or Analyzed	
Total	Prep	EPA 5030B (P/T)		0.91	11H0322_P	08/12/11 15:28	JAD
Total	Analysis	EPA 8260B		1.0	11H0322	08/13/11 13:32	JAD
Total	Prep	General Prep WC		1.00	11H0349_P	08/15/11 11:14	PAM
Total	Analysis	EPA 160.3		1.00	11H0349	08/15/11 12:22	PAM

Lab Chronicle

Client: Spotts, Stevens & McCoy

TestAmerica Job ID: KUH0219

Project/Site: [none]

Client Sample ID: SB - 12 @ 12'

Lab Sample ID: KUH0219-12

Matrix: Soil

Percent Solids: 65.6

Date Collected: 08/09/11 12:25

Date Received: 08/10/11 10:30

Prep Type	Batch	Batch	Dilution	Batch	Prepared	Analyst	Lab	
	Type	Method	Run	Factor	Number	Or Analyzed		
Total	Prep	EPA 5030B (P/T)		0.83	11H0322_P	08/12/11 15:28	JAD	TAL KOP
Total	Analysis	EPA 8260B		1.0	11H0322	08/13/11 14:02	JAD	TAL KOP
Total	Prep	EPA 5030B (P/T)	RE1	1.0	11H0355_P	08/12/11 15:28	JAD	TAL KOP
Total	Analysis	EPA 8260B	RE1	50	11H0355	08/15/11 15:22	JAD	TAL KOP
Total	Prep	General Prep WC		1.00	11H0349_P	08/15/11 11:14	PAM	TAL KOP
Total	Analysis	EPA 160.3		1.00	11H0349	08/15/11 12:22	PAM	TAL KOP

Client Sample ID: SB - 13 @ 7'

Lab Sample ID: KUH0219-13

Matrix: Soil

Percent Solids: 84.2

Date Collected: 08/09/11 12:55

Date Received: 08/10/11 10:30

Prep Type	Batch	Batch	Dilution	Batch	Prepared	Analyst	Lab	
	Type	Method	Run	Factor	Number	Or Analyzed		
Total	Prep	EPA 5030B (P/T)		0.89	11H0351_P	08/15/11 11:54	JAD	TAL KOP
Total	Analysis	EPA 8260B		1.0	11H0351	08/15/11 15:52	JAD	TAL KOP
Total	Prep	General Prep WC		1.00	11H0349_P	08/15/11 11:14	PAM	TAL KOP
Total	Analysis	EPA 160.3		1.00	11H0349	08/15/11 12:22	PAM	TAL KOP

Client Sample ID: SB - 13 @ 13'

Lab Sample ID: KUH0219-14

Matrix: Soil

Percent Solids: 79.8

Date Collected: 08/09/11 13:05

Date Received: 08/10/11 10:30

Prep Type	Batch	Batch	Dilution	Batch	Prepared	Analyst	Lab	
	Type	Method	Run	Factor	Number	Or Analyzed		
Total	Prep	EPA 5030B (P/T)		0.81	11H0351_P	08/15/11 11:54	JAD	TAL KOP
Total	Analysis	EPA 8260B		1.0	11H0351	08/15/11 16:23	JAD	TAL KOP
Total	Prep	General Prep WC		1.00	11H0349_P	08/15/11 11:14	PAM	TAL KOP
Total	Analysis	EPA 160.3		1.00	11H0349	08/15/11 12:22	PAM	TAL KOP

Client Sample ID: SB - 14 @ 9.5'

Lab Sample ID: KUH0219-15

Matrix: Soil

Percent Solids: 69.1

Date Collected: 08/09/11 13:15

Date Received: 08/10/11 10:30

Prep Type	Batch	Batch	Dilution	Batch	Prepared	Analyst	Lab	
	Type	Method	Run	Factor	Number	Or Analyzed		
Total	Prep	EPA 5030B (P/T)		0.87	11H0351_P	08/15/11 11:54	JAD	TAL KOP
Total	Analysis	EPA 8260B		1.0	11H0351	08/15/11 16:54	JAD	TAL KOP
Total	Prep	General Prep WC		1.00	11H0349_P	08/15/11 11:14	PAM	TAL KOP
Total	Analysis	EPA 160.3		1.00	11H0349	08/15/11 12:22	PAM	TAL KOP

Client Sample ID: SB - 15 @ 6.7'

Lab Sample ID: KUH0219-16

Matrix: Soil

Percent Solids: 81

Date Collected: 08/09/11 13:25

Date Received: 08/10/11 10:30

Prep Type	Batch	Batch	Dilution	Batch	Prepared	Analyst	Lab	
	Type	Method	Run	Factor	Number	Or Analyzed		
Total	Prep	EPA 5030B (P/T)		0.91	11H0351_P	08/15/11 11:54	JAD	TAL KOP
Total	Analysis	EPA 8260B		1.0	11H0351	08/15/11 17:24	JAD	TAL KOP
Total	Prep	General Prep WC		1.00	11H0349_P	08/15/11 11:14	PAM	TAL KOP

Lab Chronicle

Client: Spotts, Stevens & McCoy
Project/Site: [none]

TestAmerica Job ID: KUH0219

Client Sample ID: SB - 15 @ 6.7'

Lab Sample ID: KUH0219-16

Date Collected: 08/09/11 13:25

Matrix: Soil

Date Received: 08/10/11 10:30

Percent Solids: 81

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total	Analysis	EPA 160.3		1.00	11H0349	08/15/11 12:22	PAM	TAL KOP

Laboratory References:

TAL KOP = TestAmerica King Of Prussia, 1008 West Ninth Avenue, King of Prussia, PA 19406, TEL 610.337.9992

Certification Summary

Client: Spotts, Stevens & McCoy

TestAmerica Job ID: KUH0219

Project/Site: [none]

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica King Of Prussia	New Jersey	NELAC	2	PA004
TestAmerica King Of Prussia	Pennsylvania	NELAC	3	46-00505
TestAmerica King Of Prussia	USDA	USDA		P330-10-00327

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY REPORT

1008 W. Ninth Avenue
King of Prussia, PA 19406
(610) 337-9992
FAX (610) 337-9939

08/19/2011

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY REPORT

1008 W. Ninth Avenue
King of Prussia, PA 19406
(610) 337-9992
FAX (610) 337-9939

08/19/2011

Client: SSM		Bill To: Same as Client		TAT:	STD.	5 DAY	4 DAY	3 DAY	2 DAY	1 DAY	<24 HRS.
Report to: E-mail:	Mark Smith	Phone #: (610) 621-1000	State & Program:	PA ACT 111	Received:	<input checked="" type="checkbox"/> ice	<input type="checkbox"/> ambient	<input type="checkbox"/> DATE RESULTS NEEDED:	8/17/11		
Address: 1047 N. Park		Address:		Terms: Net 30 days		Deliverable Package:		Temp. Upon Receipt: 4.8°C			
Project Name: 2331 E. Market		Project #/PO#:		# of Bottles		ANALYSIS TYPE		LABORATORY ID NUMBER			
Sampler: MJS & CM		Preservative Used						KUHO219-C1			
FIELD ID, LOCATION		SAMPLE MATRIX									
1 SB-2 @ 4'ft	PID: 0	8-9-11	0845	SOL		H	H				-04
2 SB-2 @ 15ft	PID: 0	0850				H	H				-05
3 SB-1 @ 4'ft	PID: 0	0910				H	H				-06
4 SB-1 @ 4'ft + 2.6 ft	PID: 0	0930				H	H				-07
5 SB-3 @ 12'	PID: 0	0955	0955			H	H				-08
6 SB-4 @ 13'	PID: 0	1025				H	H				-09
7 SB-5 @ 8'	PID: 27pm	1050				H	H	X	X		-10
8 SB-6 @ 6.5'	PID: 0	1110				H	H	X	X		
9 SB-7 @ 4.5'	PID: 0	1120				H	H	X	X		
10 SB-8 @ 4.5'	PID: B.8pm	1130				H	H	X			
REISSUED		DATE 8/10/11 RECEIVED		DATE 8/10/11 REISSUED		TIME 10:30 AM		TIME 10:30 AM		DATE	
RENOUISHED		TIME 10:30 AM		TIME 10:30 AM		DATE		TIME		DATE	
COMMENTS: as 1,2,4E, THINS 1,2 OCT, 1-1-PCE, MET, METHANE CHROMATE, PCE, TCE, TCA, VNL, VNL, OTHERS 1,4E, PAGE 2											

Page 16 of 18

Cooler Receipt Form

WORK ORDER #: KUAO219

Client: SSAI

Project: 2331 E Market

Temperature Upon Receipt by IR: 4.8 °C

Cooler received from: TA Courier Client FedEx UPS Other:

For Received Shipments only:

Number of Coolers: 1 2 3+
Ice Present? Y N N/A Melted

Custody Seals Intact? Y N

Packing Material: Bubble Wrap Other None

For Samples to be Subcontracted after receipt only:

ALL preserved containers (except VOA) checked for correct pH and are acceptable? Y N N/A

If Samples need preservation: Preservative/lot#:

Ensure that Preservation Stickers are affixed to each container.

Residual Chlorine checks done on each container that needs it? Y N N/A

Vials have air bubbles > 6mm? Y N N/A

Sufficient volume for all analyses? Y N

All Sample Containers Intact Y N

All Sample Containers received: Y N

List Discrepancies below if indicated:

All Sample Containers labeled: Y N

All Container labels match COC: Y N

Review COC against Sample Acceptance Checklist:

1. Client Name & Address present
2. Project Name and/or Number included
3. Field Sampler Name listed
4. Field ID - one sample per line
5. Date collected (for each sample)
6. Time collected (for each sample)
7. Matrix (for each sample)
8. Number & Types of bottles per sample (and preservation type)
9. Analysis Requested
10. Sign & Date in the Relinquished Box

<u>Yes</u>	No

Discrepancies:

Sample Location (State): PA NJ DE Other

State Listed on COC or Ongoing Project

PM or Client contacted? Y N N/A

Spec Sheet/CAR#:

Signature: C Schaeffer

Date/Time: 8/10/11

Miller, Jill

From: smith, mark [mark.Smith@ssmgroup.com]
Sent: Wednesday, August 10, 2011 4:25 PM
To: Miller, Jill
Subject: RE: 2331 E. Market (KUH0219)

Yes, thanks.

From: Miller, Jill [mailto:Jill.Miller@testamericainc.com]
Sent: Wednesday, August 10, 2011 4:20 PM
To: smith, mark
Subject: 2331 E. Market (KUH0219)

Mark,
Please confirm the changes to your project 2331 E. Market.

Sample SB-8 @ 4.5' should be analyzed for the PADEP Fuel Oil #2 (new) parameters like the others on the COC.

The project number 109694.0001 should be added to the project.

Thanks

JILL MILLER
Senior Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

1008 W. Ninth Avenue
King of Prussia, PA 19406
Tel 484.685.0871 Fax 610.337.9939
www.testamericainc.com

***Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at:
[Project Feedback](#)***

APPENDIX B
Data Tables & Laboratory Analysis Reports
By ARM Group, Inc.

SB-16

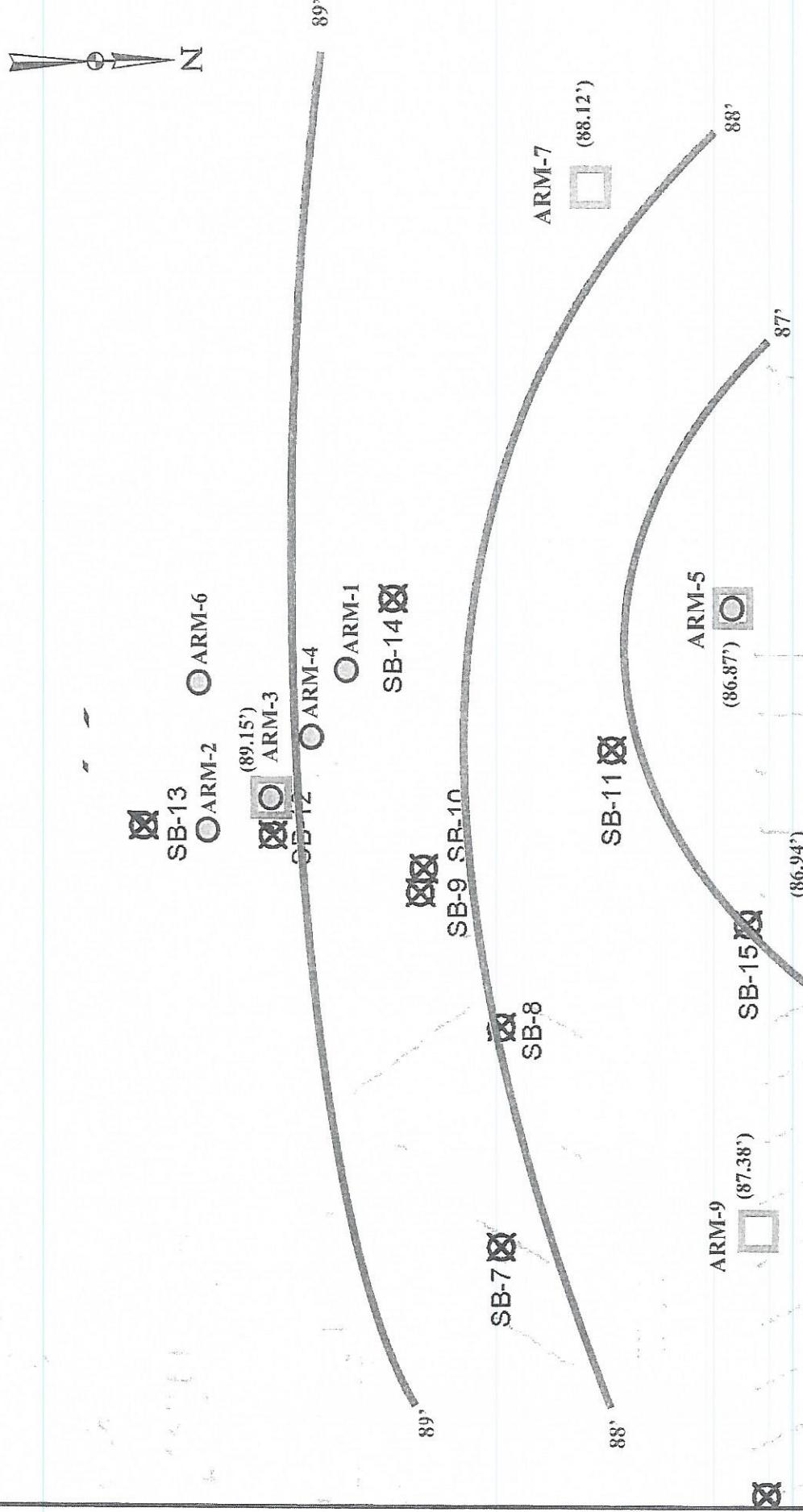


Figure 1 - GW Contour Map

2331 East Market Street
Springetsbury Township
York, PA

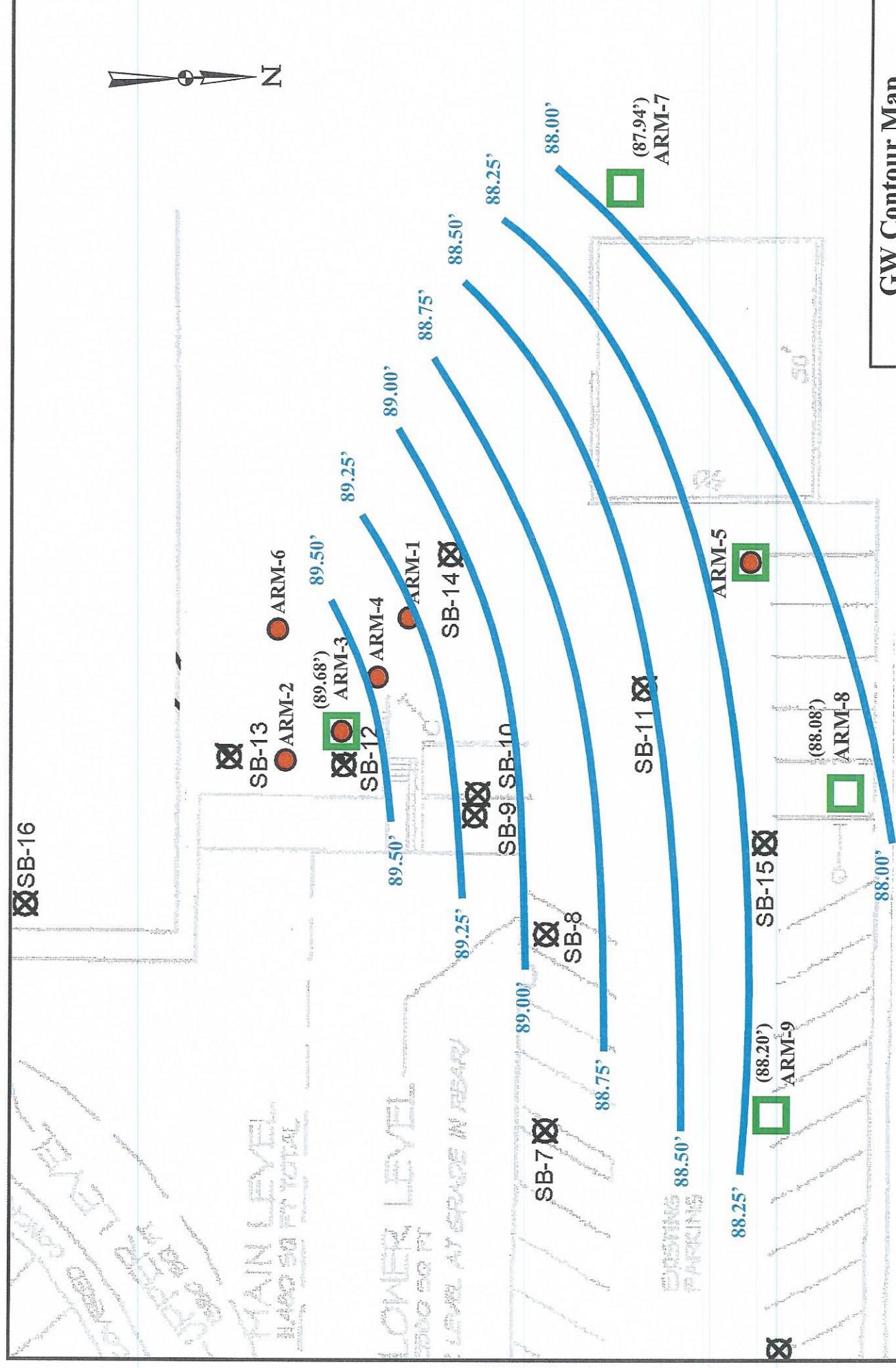
* Relative elevations based on arbitrary
on-sit benchmark

ARM-9 = Soil Sample Location
ARM-6 = GW Monitoring Well

February 2012
11411



ARM Group Inc.
Earth Resource Engineers and Consultants
1149 West Cessna Rd., • Horsham, PA 19041-2921



(87.80') = 6/19/13 GW Elevation*

— = Inferred GW Contour

ARM-9 = Soil Sample Location

= GW Monitoring Well

on-site benchmark

GW Contour Map

2331 East Market Street
Springettsbury Township
York, PA

ARM Group Inc.
 Earth Resource Engineers and Consultants
 1129 West Governor Road • Herkimer, NY 13043-9797

June 2013

TABLE 2
Summary of Groundwater Sample Analytical Results
2331 E Market Street, York, Pennsylvania
ARM Project Number 11411

Constituent	PADEP NSCs		Groundwater Sample Results												Groundwater Sample Results										
	Residential	Non-Residential	PADEP	Volatilization to Indoor Air Screening Value (Res)	ARM-3A [10-20-11]	ARM-3B [2-6-12]	ARM-3 [3-29-12]	ARM-3 [7-1-12]	ARM-3 [10-26-12]	ARM-3 [2-3-13]	ARM-3 [6-19-13]	ARM-3 [11-13-13]	ARM-3 [20-21-11]	ARM-5 [2-6-12]	ARM-5 [3-29-12]	ARM-5 [3-29-12]	ARM-5 [2-6-12]	ARM-7 [7-1-12]	ARM-7 [10-26-12]	ARM-7 [2-13-13]	ARM-7 [6-19-13]				
ACETONE	33,000	92,000	330,000	-	ND@1.0	ND@1.0	ND@10.0	ND@10.0	ND@50.0	ND@50.0	ND@50.0	ND@50.0	ND@10.0	ND@10.0	ND@10.0	ND@10.0	ND@10.0	ND@10.0	ND@10.0	ND@10.0	ND@10.0	ND@10.0	ND@10.0		
BROMODICHLOROMETHANE	80	80	1,600	410	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	
CHLOROFORM	80	80	800	410	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	
DICHLOROBENZENE, 1,2-	600	600	60,000	-	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	
DICHLOROETHENE, 1,1-	31	160	310	160,000	-	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
DICHLOROETHANE, 1,2-	5	5	50	2,800	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
DICHLOROETHYLENE, CIS-1,2-	70	70	700	42,000	976	1,020	1,560	1,810	2,160	2,160	2,160	2,160	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
DICHLOROETHYLENE, TRANS-1,2-	100	100	1,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
METHYLENE CHLORIDE	5	5	500	77,000	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TRICHLOROETHYLENE, 1,1,2,2-	0.84	84	4.3	37,000	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TETRACHLOROETHYLENE (PCE)	5	5	50	42,000	1,800	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TRICHLOROETHANE, 1,1,1-	200	200	2,000	-	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TRICHLOROETHANE, 1,1,2-	5	5	50	5,400	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TRICHLOROETHYLENE (TCE)	5	5	50	14,000	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
VINYL CHLORIDE	2	2	20	1,800	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TOTAL VOCs:	-	-	-	-	3,2519	51,149	8,615	8,103	8,555	11,427	9,722	5,653	4,571	48	37	44	483	521	849	1,588	1,133	1,588	1,588	1,588	1,588

Constituent	PADEP NSCs		Groundwater Sample Results												Groundwater Sample Results												
	Residential	Non-Residential	PADEP	Volatilization to Indoor Air Screening Value (Res)	ARM-8 [2-6-12]	ARM-8 [3-29-12]	ARM-8 [7-11-12]	ARM-8 [10-26-12]	ARM-8 [6-19-13]	ARM-8 [11-13-13]	ARM-8 [20-21-11]	ARM-8 [2-6-12]	ARM-8 [3-29-12]	ARM-8 [7-11-12]	ARM-8 [10-26-12]	ARM-8 [6-19-13]	ARM-8 [11-13-13]	ARM-9 [2-6-12]	ARM-9 [3-29-12]	ARM-9 [7-11-12]	ARM-9 [10-26-12]	ARM-9 [6-19-13]	ARM-9 [11-13-13]				
ACETONE	33,000	92,000	330,000	-	ND@0.0	ND@0.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0		
BROMODICHLOROMETHANE	80	80	1,600	410	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0		
CHLOROFORM	80	80	800	410	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0		
DICHLOROBENZENE, 1,2-	600	600	60,000	-	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0		
DICHLOROETHENE, 1,1-	31	180	310	160,000	-	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	
DICHLOROETHANE, 1,2-	5	5	50	2,800	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@5.0	ND@5.0	ND@5.0	ND@5.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	
DICHLOROETHYLENE, CIS-1,2-	70	70	700	42,000	143	10,7	12,5	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
DICHLOROETHYLENE, TRANS-1,2-	100	100	1,000	58,000	77,000	800	800	800	800	800	800	800	800	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
METHYLENE CHLORIDE	5	5	500	77,000	37,000	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TRICHLOROETHYLENE (PCE)	5	5	50	42,000	268	38.4	42.3	42.3	42.3	42.3	42.3	42.3	42.3	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TRICHLOROETHANE, 1,1,1-	200	200	2,000	-	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TRICHLOROETHANE, 1,1,2-	5	5	50	5,400	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TRICHLOROETHYLENE (TCE)	2	2	20	1,800	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
VINYL CHLORIDE	2	2	20	1,800	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0	ND@1.0
TOTAL VOCs:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes:
All units shown are $\mu\text{g/L}$, micrograms per liter, or parts per billion.

NSC = Medium-specific concentration; residential, used aquifer; TDS < 250 mg/L.

Non-Residential Groundwater MSC = Medium-specific concentration; non-residential, used aquifer.

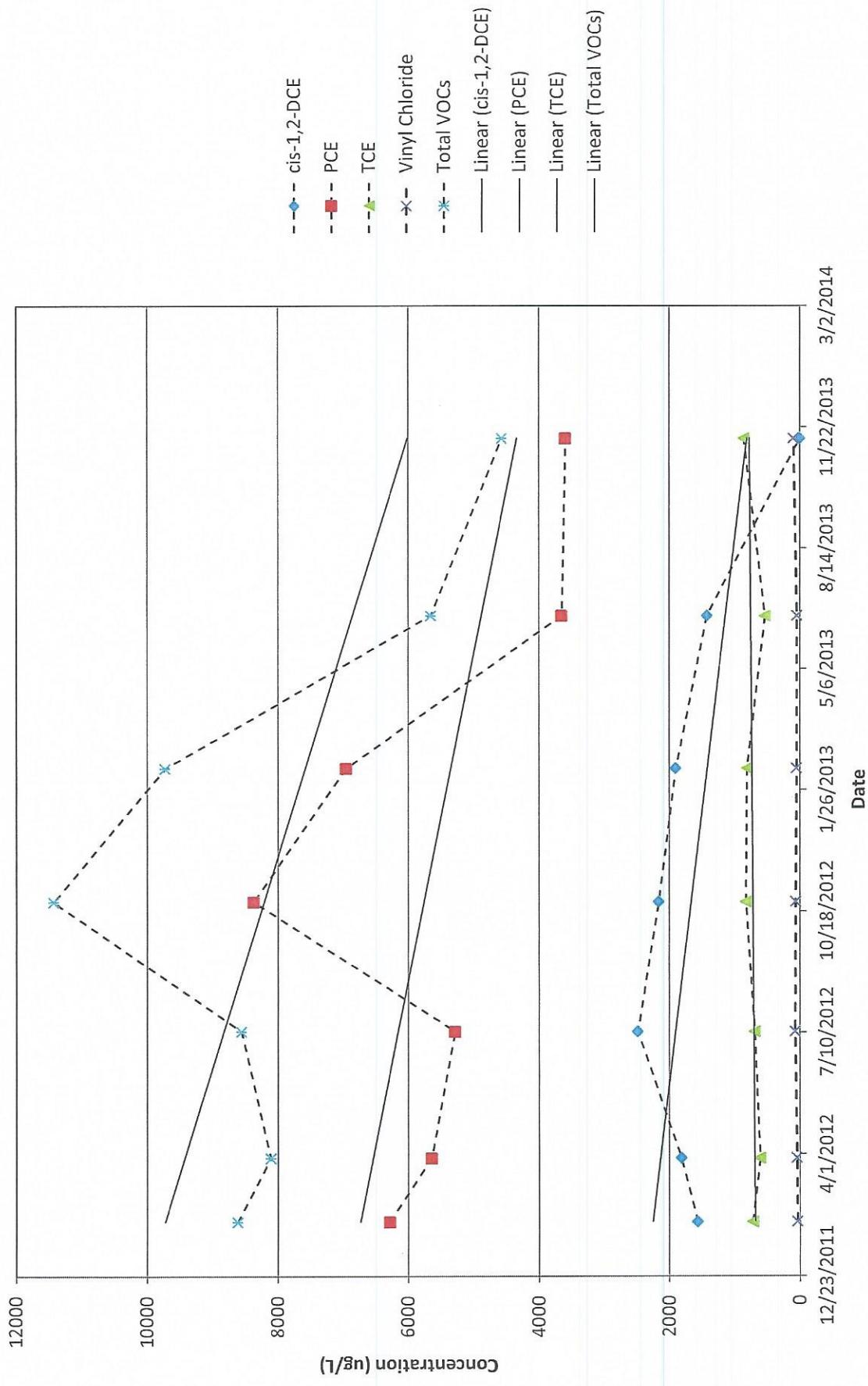
ND = Parameter not detected; ND = detection limit; all detection limits were below the MSC.

Ns = Parameter not analyzed.

Bold and shaded = evidence of use or more standard

ARM-3

2331 E Market Street
(ARM Project 11411)



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5511 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 DoD ELAP: A2LA 0818.01

State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

June 25, 2013

Ms. Julie Stahl
ARM Group
1129 W. Governor Road
PO Box 797
Hershey, PA 17033

Certificate of Analysis

Project Name:	2331 E Market Street	Workorder:	1033265
Purchase Order:	11411	Workorder ID:	2331 E Market Street

Dear Ms. Stahl,

Enclosed are the analytical results for samples received by the laboratory on Wednesday, June 19, 2013.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS York: 978 Loucks Mill Road, York, PA 17402 717-505-5280

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Matt Bixler, Mr. Jeremy Byler, Mr. Brad Sick, Mr. Steve Fulton

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.


Anna G Milliken
Technical Manager

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ALS Environmental



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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 1033265 2331 E Market Street

Discard Date: 07/09/2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1033265001	ARM - 3	Ground Water	6/19/13 11:30	6/19/13 12:45	Kevin Smith
1033265002	ARM - 7	Ground Water	6/19/13 10:40	6/19/13 12:45	Kevin Smith
1033265003	ARM - 8	Ground Water	6/19/13 10:00	6/19/13 12:45	Kevin Smith
1033265004	ARM - 9	Ground Water	6/19/13 09:25	6/19/13 12:45	Kevin Smith

Workorder Comments:

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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Vancouver • Waterloo • Winnipeg • Yellowknife United States: Cincinnati • Everett • Fort Collins • Holland • Houston • Middletown • Salt Lake City • Spring City • York Mexico: Monterrey



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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265001	Date Collected:	6/19/2013 11:30	Matrix:	Ground Water
Sample ID:	ARM - 3	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	50.0	SW846 8260B		6/25/13 03:47	GLQ A
Benzene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Bromoform	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Bromomethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
2-Butanone	ND		ug/L	50.0	SW846 8260B		6/25/13 03:47	GLQ A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Chloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Chloroform	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Chloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		6/25/13 03:47	GLQ A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
cis-1,2-Dichloroethene	1420		ug/L	100	SW846 8260B		6/25/13 04:09	GLQ A
trans-1,2-Dichloroethene	11.2		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		6/25/13 03:47	GLQ A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		6/25/13 03:47	GLQ A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Styrene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Tetrachloroethene	3650		ug/L	100	SW846 8260B		6/25/13 04:09	GLQ A
Toluene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Total Xylenes	ND		ug/L	15.0	SW846 8260B		6/25/13 03:47	GLQ A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Trichloroethene	529		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Vinyl Chloride	43.1		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
o-Xylene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
mp-Xylene	ND		ug/L	10.0	SW846 8260B		6/25/13 03:47	GLQ A

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265001	Date Collected:	6/19/2013 11:30	Matrix:	Ground Water
Sample ID:	ARM - 3	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	86.8	%	%	62-133	SW846 8260B		6/25/13 03:47	GLQ	A
4-Bromofluorobenzene (S)	92.8	%	%	79-114	SW846 8260B		6/25/13 03:47	GLQ	A
Dibromofluoromethane (S)	82.3	%	%	78-116	SW846 8260B		6/25/13 03:47	GLQ	A
Toluene-d8 (S)	86.6	%	%	76-127	SW846 8260B		6/25/13 03:47	GLQ	A
1,2-Dichloroethane-d4 (S)	87.7	%	%	62-133	SW846 8260B		6/25/13 04:09	GLQ	A
4-Bromofluorobenzene (S)	93	%	%	79-114	SW846 8260B		6/25/13 04:09	GLQ	A
Dibromofluoromethane (S)	84.2	%	%	78-116	SW846 8260B		6/25/13 04:09	GLQ	A
Toluene-d8 (S)	86.5	%	%	76-127	SW846 8260B		6/25/13 04:09	GLQ	A

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Methods for the analysis of volatile organics require that the sample be preserved to a pH less than 2 using HCl. This sample had a pH greater than 2 when received by the lab.


 Anna G. Milliken
 Technical Manager

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265002	Date Collected:	6/19/2013 10:40	Matrix:	Ground Water
Sample ID:	ARM - 7	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	50.0	SW846 8260B		6/25/13 04:32	GLQ A
Benzene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Bromoform	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Bromomethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
2-Butanone	ND		ug/L	50.0	SW846 8260B		6/25/13 04:32	GLQ A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Chloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Chloroform	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Chloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		6/25/13 04:32	GLQ A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
cis-1,2-Dichloroethene	250		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
trans-1,2-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		6/25/13 04:32	GLQ A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		6/25/13 04:32	GLQ A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Styrene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Tetrachloroethene	769		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Toluene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Total Xylenes	ND		ug/L	15.0	SW846 8260B		6/25/13 04:32	GLQ A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Trichloroethene	114		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Vinyl Chloride	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
o-Xylene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
mp-Xylene	ND		ug/L	10.0	SW846 8260B		6/25/13 04:32	GLQ A

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265002	Date Collected:	6/19/2013 10:40	Matrix:	Ground Water
Sample ID:	ARM - 7	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
<i>Surrogate Recoveries</i>								
1,2-Dichloroethane-d4 (S)	87.1	%	62-133	SW846 8260B			6/25/13 04:32	GLQ A
4-Bromofluorobenzene (S)	93.7	%	79-114	SW846 8260B			6/25/13 04:32	GLQ A
Dibromofluoromethane (S)	84.8	%	78-116	SW846 8260B			6/25/13 04:32	GLQ A
Toluene-d8 (S)	86.9	%	76-127	SW846 8260B			6/25/13 04:32	GLQ A

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Methods for the analysis of volatile organics require that the sample be preserved to a pH less than 2 using HCl. This sample had a pH greater than 2 when received by the lab.

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265003	Date Collected:	6/19/2013 10:00	Matrix:	Ground Water
Sample ID:	ARM - 8	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		6/25/13 04:54	GLQ A
Benzene	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Bromoform	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Bromomethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
2-Butanone	ND		ug/L	10.0	SW846 8260B		6/25/13 04:54	GLQ A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Chloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Chloroform	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Chloromethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		6/25/13 04:54	GLQ A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
cis-1,2-Dichloroethene	1.5		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		6/25/13 04:54	GLQ A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		6/25/13 04:54	GLQ A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Styrene	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Tetrachloroethene	13.3		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Toluene	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		6/25/13 04:54	GLQ A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Trichloroethene	1.4		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
o-Xylene	ND		ug/L	1.0	SW846 8260B		6/25/13 04:54	GLQ A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		6/25/13 04:54	GLQ A

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID: 1033265003 Date Collected: 6/19/2013 10:00 Matrix: Ground Water
Sample ID: ARM - 8 Date Received: 6/19/2013 12:45

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	By	Cntr
1,2-Dichloroethane-d4 (S)	88.4	%	62-133	SW846 8260B			6/25/13 04:54	GLQ	A
4-Bromofluorobenzene (S)	93.3	%	79-114	SW846 8260B			6/25/13 04:54	GLQ	A
Dibromofluoromethane (S)	84.1	%	78-116	SW846 8260B			6/25/13 04:54	GLQ	A
Toluene-d8 (S)	86	%	76-127	SW846 8260B			6/25/13 04:54	GLQ	A

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265004	Date Collected:	6/19/2013 09:25	Matrix:	Ground Water
Sample ID:	ARM - 9	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		6/25/13 05:17	GLQ	A
Benzene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Bromoform	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		6/25/13 05:17	GLQ	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Chloroform	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		6/25/13 05:17	GLQ	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		6/25/13 05:17	GLQ	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		6/25/13 05:17	GLQ	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Styrene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Tetrachloroethene	10.1		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Toluene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		6/25/13 05:17	GLQ	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		6/25/13 05:17	GLQ	A

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265004	Date Collected:	6/19/2013 09:25	Matrix:	Ground Water
Sample ID:	ARM - 9	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed By</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	87.3	%	62-133	SW846 8260B			6/25/13 05:17	GLQ	A
4-Bromofluorobenzene (S)	93.1	%	79-114	SW846 8260B			6/25/13 05:17	GLQ	A
Dibromofluoromethane (S)	83.4	%	78-116	SW846 8260B			6/25/13 05:17	GLQ	A
Toluene-d8 (S)	86.6	%	76-127	SW846 8260B			6/25/13 05:17	GLQ	A

Sample Comments:

Anna G Milliken
 Technical Manager

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CHAIN OF CUSTODY / REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SUPPLIER, INSTRUCTIONS ON THE BACK

Co. Name: **ARJ Group Inc.**
Contact Person: **Kevin Smith** Phone: **610 525 0569**
Address: **1125 West Centerway Rd.,
Bethel, PA 17023**

Bill To: Other (not listed):

PO#:

Project Name#: **2733 E Thetford 1/14/11** ALS Quote #:

TAT: General Standard (15 to 10-12 business days).

Rush Subject to ALS apparent tardy charges.
Approved By: **Ethan Smith**

Fax#: **570 422 4944** Ext. **101**

Sample Description/Location:

ODC Comments:

Sample Date:

Method:

Time:

Date:



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November 22, 2013

Mr. Steve Fulton
ARM Group
1129 W. Governor Road
PO Box 797
Hershey, PA 17033

Certificate of Analysis

Project Name: **Rock Commercial**
Purchase Order: **11411**

Workorder: **1058304**
Workorder ID: **Rock Commercial**

Dear Mr. Fulton,

Enclosed are the analytical results for samples received by the laboratory on Wednesday, November 13, 2013.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS York: 978 Loucks Mill Road, York, PA 17402 717-505-5280

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

*This page is included as part of the Analytical Report and
must be retained as a permanent record thereof.*

Susan Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 1058304 Rock Commercial

Discard Date: 12/06/2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1058304001	ARM-8	Ground Water	11/13/13 10:50	11/13/13 15:15	Christine Iozza
1058304002	ARM-9	Ground Water	11/13/13 11:35	11/13/13 15:15	Christine Iozza
1058304003	ARM-7	Ground Water	11/13/13 12:25	11/13/13 15:15	Christine Iozza
1058304004	ARM-3	Ground Water	11/13/13 12:55	11/13/13 15:15	Christine Iozza

Workorder Comments:

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304001	Date Collected:	11/13/2013 10:50	Matrix:	Ground Water
Sample ID:	ARM-8	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		11/20/13 19:33	CJG A
Benzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Bromoform	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Bromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
2-Butanone	ND		ug/L	10.0	SW846 8260B		11/20/13 19:33	CJG A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Chloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Chloroform	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Chloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		11/20/13 19:33	CJG A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
cis-1,2-Dichloroethene	26.2		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		11/20/13 19:33	CJG A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Freon 113	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		11/20/13 19:33	CJG A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		11/20/13 19:33	CJG A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		11/20/13 19:33	CJG A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304001	Date Collected:	11/13/2013 10:50	Matrix:	Ground Water
Sample ID:	ARM-8	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
Styrene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Tetrachloroethene	104	1	ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Toluene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:33	CJG A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:33	CJG A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Trichloroethene	16.9		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
o-Xylene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:33	CJG A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	Cntr
1,2-Dichloroethane-d4 (S)	91.2		%	62-133	SW846 8260B		11/20/13 19:33	CJG A
4-Bromofluorobenzene (S)	103		%	79-114	SW846 8260B		11/20/13 19:33	CJG A
Dibromofluoromethane (S)	95.6		%	78-116	SW846 8260B		11/20/13 19:33	CJG A
Toluene-d8 (S)	98.5		%	76-127	SW846 8260B		11/20/13 19:33	CJG A

Sample Comments:

Susan Scherer
 Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304002	Date Collected:	11/13/2013 11:35	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		11/20/13 19:55	CJG A
Benzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Bromoform	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Bromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
2-Butanone	ND		ug/L	10.0	SW846 8260B		11/20/13 19:55	CJG A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Chloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Chloroform	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Chloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		11/20/13 19:55	CJG A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
cis-1,2-Dichloroethene	7.2		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		11/20/13 19:55	CJG A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Freon 113	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		11/20/13 19:55	CJG A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		11/20/13 19:55	CJG A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		11/20/13 19:55	CJG A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304002	Date Collected:	11/13/2013 11:35	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
Styrene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Tetrachloroethene	57.0	1	ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Toluene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:55	CJG A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:55	CJG A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Trichloroethene	4.9		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
o-Xylene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:55	CJG A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	Cntr
1,2-Dichloroethane-d4 (S)	90.4		%	62-133	SW846 8260B		11/20/13 19:55	CJG A
4-Bromofluorobenzene (S)	102		%	79-114	SW846 8260B		11/20/13 19:55	CJG A
Dibromofluoromethane (S)	94.8		%	78-116	SW846 8260B		11/20/13 19:55	CJG A
Toluene-d8 (S)	98.7		%	76-127	SW846 8260B		11/20/13 19:55	CJG A

Sample Comments:

Susan Scherer
 Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304003	Date Collected:	11/13/2013 12:25	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		11/20/13 20:17 CJG	A
Benzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Bromoform	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		11/20/13 20:17 CJG	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Chloroform	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		11/20/13 20:17 CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
cis-1,2-Dichloroethene	611		ug/L	100	SW846 8260B		11/21/13 21:11 CJG	B
trans-1,2-Dichloroethene	4.9		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		11/20/13 20:17 CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Freon 113	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		11/20/13 20:17 CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		11/20/13 20:17 CJG	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		11/20/13 20:17 CJG	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17 CJG	A

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304003	Date Collected:	11/13/2013 12:25	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
Styrene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Tetrachloroethene	755		ug/L	100	SW846 8260B		11/21/13 21:11	CJG B
Toluene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 20:17	CJG A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 20:17	CJG A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Trichloroethene	232		ug/L	100	SW846 8260B		11/21/13 21:11	CJG B
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
o-Xylene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		11/20/13 20:17	CJG A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	90.1		%	62-133	SW846 8260B		11/20/13 20:17	CJG A
4-Bromofluorobenzene (S)	102		%	79-114	SW846 8260B		11/20/13 20:17	CJG A
Dibromofluoromethane (S)	97.2		%	78-116	SW846 8260B		11/20/13 20:17	CJG A
Toluene-d8 (S)	99.7		%	76-127	SW846 8260B		11/20/13 20:17	CJG A
1,2-Dichloroethane-d4 (S)	115		%	62-133	SW846 8260B		11/20/13 20:17	CJG A
4-Bromofluorobenzene (S)	108		%	79-114	SW846 8260B		11/21/13 21:11	CJG B
Dibromofluoromethane (S)	80		%	78-116	SW846 8260B		11/21/13 21:11	CJG B
Toluene-d8 (S)	96.9		%	76-127	SW846 8260B		11/21/13 21:11	CJG B

Sample Comments:

Susan Scherer
 Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304004	Date Collected:	11/13/2013 12:55	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		11/20/13 20:39	CJG A
Benzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Bromoform	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Bromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
2-Butanone	ND		ug/L	10.0	SW846 8260B		11/20/13 20:39	CJG A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Chloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Chloroform	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Chloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		11/20/13 20:39	CJG A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,2-Dichlorobenzene	1.1		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,1-Dichloroethene	3.7		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
trans-1,2-Dichloroethene	28.4		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		11/20/13 20:39	CJG A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Freon 113	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		11/20/13 20:39	CJG A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		11/20/13 20:39	CJG A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		11/20/13 20:39	CJG A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304004	Date Collected:	11/13/2013 12:55	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
Styrene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
Tetrachloroethene	3590		ug/L	100	SW846 8260B		11/21/13 21:28	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 20:39	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 20:39	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
Trichloroethene	853		ug/L	100	SW846 8260B		11/21/13 21:28	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
Vinyl Chloride	95.2		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		11/20/13 20:39	CJG	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	By	Cntr
1,2-Dichloroethane-d4 (S)	89.3		%	62-133	SW846 8260B		11/20/13 20:39	CJG	A
4-Bromofluorobenzene (S)	104		%	79-114	SW846 8260B		11/20/13 20:39	CJG	A
Dibromofluoromethane (S)	97.1		%	78-116	SW846 8260B		11/20/13 20:39	CJG	A
Toluene-d8 (S)	101		%	76-127	SW846 8260B		11/20/13 20:39	CJG	A
1,2-Dichloroethane-d4 (S)	115		%	62-133	SW846 8260B		11/21/13 21:28	CJG	B
4-Bromofluorobenzene (S)	101		%	79-114	SW846 8260B		11/21/13 21:28	CJG	B
Dibromofluoromethane (S)	81.7		%	78-116	SW846 8260B		11/21/13 21:28	CJG	B
Toluene-d8 (S)	96.7		%	76-127	SW846 8260B		11/21/13 21:28	CJG	B

Sample Comments:

Susan Scherer
 Project Coordinator

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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 1058304 Rock Commercial

PARAMETER QUALIFIERS\FLAGS

- [1] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Tetrachloroethene. The % Recovery was reported as 174 and the control limits were 72 to 124.

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**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

**ALL SHADeD AREAS MUST BE COMPLETED BY THE CLIENT
SAMPLER. INSTRUCTIONS ON THE BACK**

Dogwood Lane
Middletown, PA 170
227-717-3444-5541
667-777-9944-1430



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Contact person: Steve Fulton
Address: 1129 W. Governor Rd.
Blairstown, PA 17033

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APPENDIX C
Notice of Intent to Remediate
And Administrative Notifications

Proof of Publication

State of Pennsylvania

AD # 0001602908-01

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<p>Notification of Receipt of a Plan or Report for Site Specific Standard (Section 304(n)(2)(i))</p> <p>Notice is hereby given that Barbara B. Elliott has submitted a Combined Remedial Investigation Report & Final Report to the Pennsylvania Department of Environmental Protection, Southcentral Regional Office, to demonstrate attainment of the non-residential site-specific standard for a site located at 2331 East Market St., Springettsbury Township, York County. Ms. Elliott has indicated that the remediation measures taken will attain compliance with the non-residential site-specific cleanup standard established under the Land Recycling and Environmental Remediation Standards Act.</p> <p>This notice is made under the provision of the Land Recycling and Environmental Remediation Standards Act, the Act of May 19, 1995, P.L. #4, No. 2.</p>
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4/29/2016

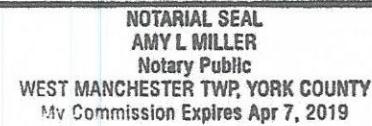
COMMONWEALTH OF PENNSYLVANIA COUNTY OF YORK

Before me, a Notary Public, personally came Pam Rodencal who being duly sworn deposes and says that she is the Legal Advertising Clerk of The York Dispatch/York Sunday News and York Daily Record and her personal knowledge of the publication of the advertisement mentioned in the foregoing statement as to the time, place and character of publications are true, and that the affiant is not interested in the subject matter of the above mentioned advertisement.

Sworn and subscribed to before me, on
this 29 day of April 2016

Amy L. Miller } Pam Rodencal
Notary Public

COMMONWEALTH OF PENNSYLVANIA



The charge for the following publication of above mentioned advertisement
and the expense of the affidavit.

Advertisement Cost	\$132.60
Affidavit Fee	\$5.00
Total Cost	\$137.60

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Kristen Denne
Springettsbury Township
1501 Mount Zion Rd.
York, PA 17402



9590 9403 0700 5196 5283 45

2. Article Number (Transfer from service label)

7015 0920 0002 1775 1654

COMPLETE THIS SECTION ON DELIVERY

A. Signature

 Agent Addressee

B. Received by (Printed Name)

Diane Roberts 4-28-16

C. Date of Delivery

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
Insured Mail
- Collect on Delivery Restricted Delivery
Insured Mail Restricted Delivery
(over \$500)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

PS Form 3811, April 2015 PSN 7530-02-000-9053

Domestic Return Receipt



For DEP Use Only

PF # _____

Rem ID # _____

NOTICE OF INTENT TO REMEDIATE

Act 1995-2 requires four general information items to be included in the NIR: the general location, listing of contaminants, intended use of property, and proposed remediation measures. In addition, indicate the standard(s) to be obtained (if known) and attach a scaled site map (if available).

Property Name 2331 E. Market Street

Former Name(s) / AKA 2331 E. Market Street

Address / Location 2331 E. Market Street

City York Zip Code 17402

Municipality(s) Springettsbury Township County(ies) York

Latitude 39 ° (deg). 58' (min) 28.41" (sec) Longitude 76 ° (deg). 40' (min) 54.43" (sec)

Horizontal Collection Method USGS 7.5 Minute Topo Quad of West York (Terrain Navigator Application)

Horizontal Reference Datum NAD83 Reference Point Center of Site

Wish to participate in the DEP/EPA MOA. Contact Troy Conrad at tconrad@state.pa.us for details.

EPA ID#, if known _____

DEP ID#(s), if known _____
(i.e., eFACTS site ID#, storage tank facility ID#, water quality permit #, watershed permit, air quality permit #, etc.)

Date Release Occurred (if known) _____

Provide a brief description of the site contamination in plain language (e.g. fuel oil spill, historical chemical industrial area contamination), the names of any known primary contaminants to be addressed, and the intended future use of the property.

Based on soil and groundwater sampling at the site, soils and groundwater have been impacted with volatile organic compounds, most notably tetrachloroethylene (PCE) and trichloroethylene (TCE), believed to be associated with historic dry cleaning operations at the site. The site is planned to continue to be used for non-residential, commercial activities.

Provide a general description of proposed remediation measures.

The site remediation activities are expected to include institutional controls and natural attenuation, possibly with some limited soil or groundwater treatment if needed, to demonstrate attainment of the Act 2 site-specific standard for organic contaminants detected in soils and groundwater. Attainment of the Act 2 statewide health standard will be demonstrated for some constituents detected in soil and groundwater.

Remediation Standard(s) planned (if known at this time):

- | | | |
|---|--|---|
| <input type="checkbox"/> Unknown at this time | <input type="checkbox"/> Soil | <input type="checkbox"/> Groundwater |
| <input type="checkbox"/> Background Contaminants: | <input type="checkbox"/> Soil | <input type="checkbox"/> Groundwater |
| <input checked="" type="checkbox"/> Statewide Health - Residential Contaminants: tetrachloroethylene (PCE); trichloroethylene (TCE); cis-1,2-dichloroethane; vinyl chloride | <input checked="" type="checkbox"/> Soil | <input checked="" type="checkbox"/> Groundwater |
| <input type="checkbox"/> Statewide Health – Non-Residential Contaminants: | <input type="checkbox"/> Soil | <input type="checkbox"/> Groundwater |
| <input checked="" type="checkbox"/> Site Specific Contaminants: tetrachloroethylene (PCE); trichloroethylene (TCE); cis-1,2-dichloroethane; vinyl chloride | <input checked="" type="checkbox"/> Soil | <input checked="" type="checkbox"/> Groundwater |
| <input type="checkbox"/> Special Industrial Area* | <input type="checkbox"/> Soil | <input type="checkbox"/> Groundwater |
| Contaminants: | | |

*NOTE: Specific standard or Special Industrial Area require a 30-day municipal comment period

Remediator / Property Owner / Consultant. Complete the form below for each recipient obtaining a release of liability upon approval of the final report. Attach additional sheets as necessary.

Remediator

Contact Person/Title <u>Barbara Elliott</u>	eFACTS Client ID* _____
Relationship to Site <u>Owner</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* <u>Individual</u>
Phone Number <u>717-332-5084</u>	Email Address <u>chiped@aol.com</u>
Company Name _____	EIN or Federal ID # _____

Property Owner

Contact Person/Title <u>Barbara Elliott</u>	eFACTS Client ID* _____
Relationship to Site <u>Owner</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* <u>Individual</u>
Phone Number <u>717-332-5084</u>	Email Address <u>chiped@aol.com</u>
Company Name _____	EIN or Federal ID # _____

Consultant

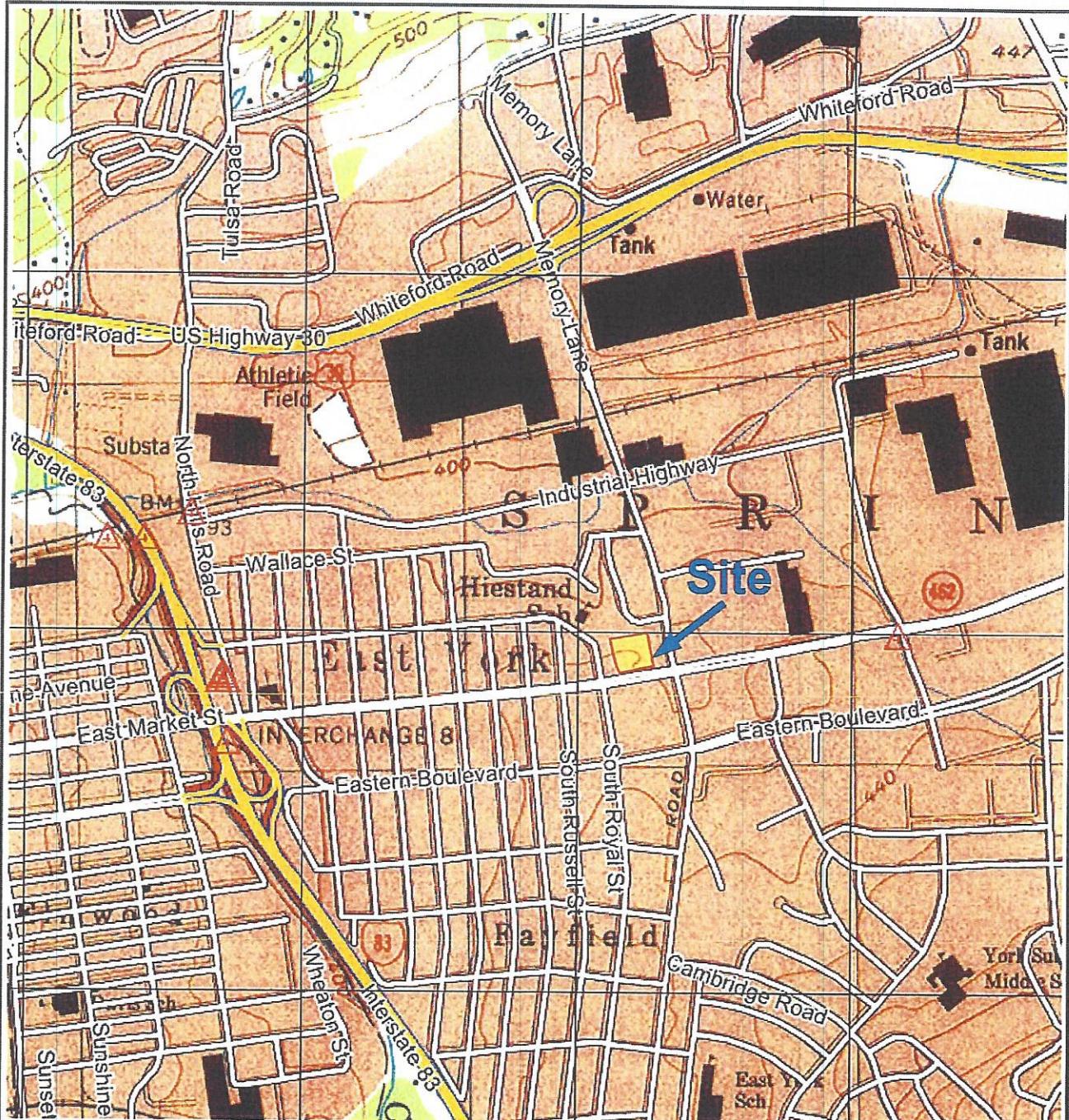
Contact Person/Title <u>Stephen Fulton/VP - Environmental Services</u>	eFACTS Client ID* _____
Relationship to Site <u>Consultant</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* <u>Pennsylvania Corporation</u>
Phone Number <u>717-508-0521</u>	Email Address <u>sfulton@armgroup.net</u>
Company Name <u>ARM Group, Inc.</u>	EIN or Federal ID # <u>25-1807594</u>

*Include eFACTS Client ID (if known) – "Client Types" below:

Association/Organization	Limited Liability company	Partnership-General
Authority	Limited Liability Partnership	Partnership-Limited
County	Municipality	School District
Estate/Trust	Non-Pennsylvania Government	Sole Proprietorship
Federal Agency	Other (Non-Government)	State Agency
Individual	Pennsylvania Corporation	

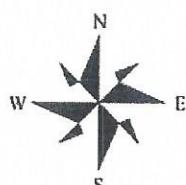
Preparer of Notice of Intent to Remediate

Name <u>Stephen B. Fulton, P.G.</u>	Title <u>Vice President - Environmental Services</u>
Phone Number <u>717-508-0521</u>	Email Address <u>sfulton@armgroup.net</u>
Company Name <u>ARM Group, Inc.</u>	eFACTS Client ID _____
Address (street, city, state, zip) <u>1129 West Governor Road, P.O. Box 797, Hershey, PA 17033</u>	



Base Map from the USGS 7.5 Minute Topographic Quadrangle of York, Pennsylvania.

Figure 1



NOT TO SCALE

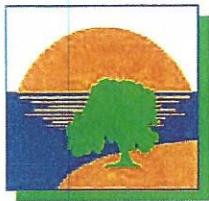
Site Location Map

2331 E. Market Street
York, PA 17402
Springettsbury Township
York County, Pennsylvania

July 2012

11411

 **ARM Group Inc.**
Earth Resource Engineers and Consultants
1129 West Governor Road • Hershey, PA 17033-9747



ARM Group Inc.

Earth Resource Engineers and Consultants

July 26, 2012

CERTIFIED MAIL NO.: 7010 3090 0003 6625 3508

Mr. John J. Holman
Springettsbury Township
1501 Mount Zion Rd.
York, PA 17402

Re: Notice of Intent to Remediate
2331 E. Market Street
Springettsbury Township
York County, Pennsylvania
(ARM Project No. 11411)

Dear Mr. Holman:

The Land Recycling and Environmental Remediation Standards Act (Act 2) requires that a Notice of Intent to Remediate (NIR) be provided to the municipality in which the site is located. Act 2 also provides that when a site is being remediated to a Site-specific Standard, the municipality is afforded a 30-day comment period. In accordance with the provisions of the Act, and on behalf of Barbara Elliot, we are formally notifying you of our intent to remediate the subject site. A copy of the NIR, which will be sent to the Pennsylvania Department of Environmental Protection (PADEP), is enclosed. This notice will be published in the Pennsylvania Bulletin, and a summary of the notice will appear in The York Daily Record, a local newspaper, on July 27, 2012.

Publication of this notice in The York Daily Record initiates the 30-day public and municipal comment period. During this time, your municipality may request to become involved in the development of the remediation and reuse plans for the site. If the municipality wishes to become involved in this project, please send your request and comments to the undersigned. Copies of these requests and of any comments can also be submitted to the Department of Environmental Protection, Southcentral Regional Office, 909 Elmerton Avenue, Harrisburg, Pennsylvania, 17110, Attention: Kathleen Horvath, P.G.

Please contact the undersigned at 717-508-0521 if you have any questions or comments regarding this notice.

Sincerely,
ARM Group Inc.



Stephen B. Fulton, P.E., P.G.
Vice President, Environmental Services

Enclosure – Notice of Intent to Remediate

cc: Mr. Ted Turnbull, ROCK Commercial Real Estate, LLC

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr John J. Holman
Springettsbury Township
1501 Mount Zion Rd.
York, PA 17402

COMPLETE THIS SECTION ON DELIVERY**A. Signature**

X Elizabeth Walker

 Agent Addressee**B. Received by (Printed Name)**

ELIZABETH WALKER 7/27/12

C. Date of Delivery

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- | | |
|--|---|
| <input checked="" type="checkbox"/> Certified Mail | <input type="checkbox"/> Express Mail |
| <input type="checkbox"/> Registered | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Insured Mail | <input type="checkbox"/> C.O.D. |

4. Restricted Delivery? (Extra Fee) Yes**2. Article Number
(Transfer from service label)**

7010 3090 0003 6625 3508

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

**Public Notice of Intent to Remediate to an
Environmental Standard**

Pursuant to the Land Recycling and Environmental Remediation Standards Act, the act of May 19, 1995, P.L. 4, No. 1995-2, notice is hereby given that ARM Group Inc., on behalf of Barbara Elliot, will submit to the Pennsylvania Department of Environmental Protection (PADEP) a Notice of Intent to Remediate (NIR) for the property located at 2331 E. Market St., Springettsbury Township, York County, Pennsylvania. The NIR indicates that volatile organic compounds, including tetrachloroethylene (PCE) and trichloroethylene (TCE), are present in soil and groundwater at the site. The proposed future use of the property is for continued non-residential, commercial use.

It is currently planned that institutional controls and natural attenuation will be utilized as necessary to demonstrate attainment of a combination of the Act 2 Statewide Health Standard and the Site-Specific Standard for soils and groundwater at the site. The Act provides for a 30-day public comment period for Site-Specific Standard remediations. The 30-day comment period is initiated with the publication of this notice. Until August 25, 2012, Springettsbury Township may submit a request to ARM Group, Inc. to be involved in the development of the remediation and reuse plans for the site. Springettsbury Township may also submit a request to ARM Group, Inc. during this 30-day comment period to develop and implement a public involvement plan. The contact address for ARM Group, Inc. is P.O. Box 797, Hershey, PA, 17033, Attn: Steve Fulton. Copies of these requests and of any comments can also be submitted to the Pennsylvania Department of Environmental Protection, Southcentral Regional Office, 909 Elmerton Avenue, Harrisburg, PA, 17110, Attn: Kathy Horvath, P.G.

Proof of Publication

State of Pennsylvania

AD # 0001270625-01

Attach Copy of
Advertisement here

Public Notice of Intent to Remediate to an Environmental Standard

Pursuant to the Land Recycling and Environmental Remediation Standards Act, the act of May 19, 1995, P.L. 4, No. 1995-2, notice is hereby given that ARM Group Inc., on behalf of Barbara Elliot, will submit to the Pennsylvania Department of Environmental Protection (PADEP) a Notice of Intent to Remediate (NIR) for the property located at 2331 E. Market St., Springetsbury Township, York County, Pennsylvania. The NIR indicates that volatile organic compounds, including tetrachloroethylene (PCE) and trichloroethylene (TCE), are present in soil and groundwater at the site. The proposed future use of the property is for continued non-residential, commercial use.

It is currently planned that institutional controls and natural attenuation will be utilized as necessary to demonstrate attainment of a combination of the Act 2 Statewide Health Standard and the Site-Specific Standard for soils and ground water at the site. The Act provides for a 30-day public comment period for Site-Specific Standard remediations. The 30-day comment period is initiated with the publication of this notice. Until August 25, 2012, Springetsbury Township may submit a request to ARM Group, Inc. to be involved in the development of the remediation and reuse plans for the site. Springetsbury Township may also submit a request to ARM Group, Inc. during this 30-day comment period to develop and implement a public involvement plan. The contact address for ARM Group, Inc. is P.O. Box 797, Hershey, PA, 17033, Attn: Steve Fulton. Copies of these requests and of any comments can also be submitted to the Pennsylvania Department of Environmental Protection, Southcentral Regional Office, 909 Elmer Avenue, Harrisburg, PA, 17110, Attn: Kathy Horvath, P.G.

The York Dispatch/York Sunday News and York Daily Record are the names of the daily newspaper(s) of general circulation published continuously for more than six months at its principal place of business, 1891 Loucks Road, York, PA 17408.

The printed copy of the advertisement hereto attached is a true copy, exactly as printed and published, of an advertisement printed in the regular issues of the said The York Dispatch/York Sunday News and York Daily Record published on the following dates, viz:

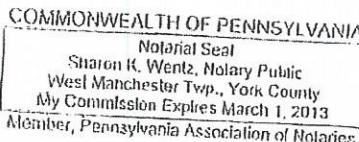
7/27/2012

COMMONWEALTH OF PENNSYLVANIA COUNTY OF YORK

Before me, a Notary Public, personally came Linda Smith who being duly sworn deposes and says that she is the Layout Supervisor of The York Dispatch/York Sunday News and York Daily Record and her personal knowledge of the publication of the advertisement mentioned in the foregoing statement as to the time, place and character of publications are true, and that the affiant is not interested in the subject matter of the above mentioned advertisement.

Sworn and subscribed to before me, on
this 27 day of July 2012

Sharon K. Wentz } Betha Sutt
Notary Public



The charge for the following publication of above mentioned advertisement and the expense of the affidavit.

Advertisement Cost	\$273.00
Affidavit Fee	5.00
Total Cost	\$278.00

APPENDIX B
Data Tables & Laboratory Analysis Reports
By ARM Group, Inc.

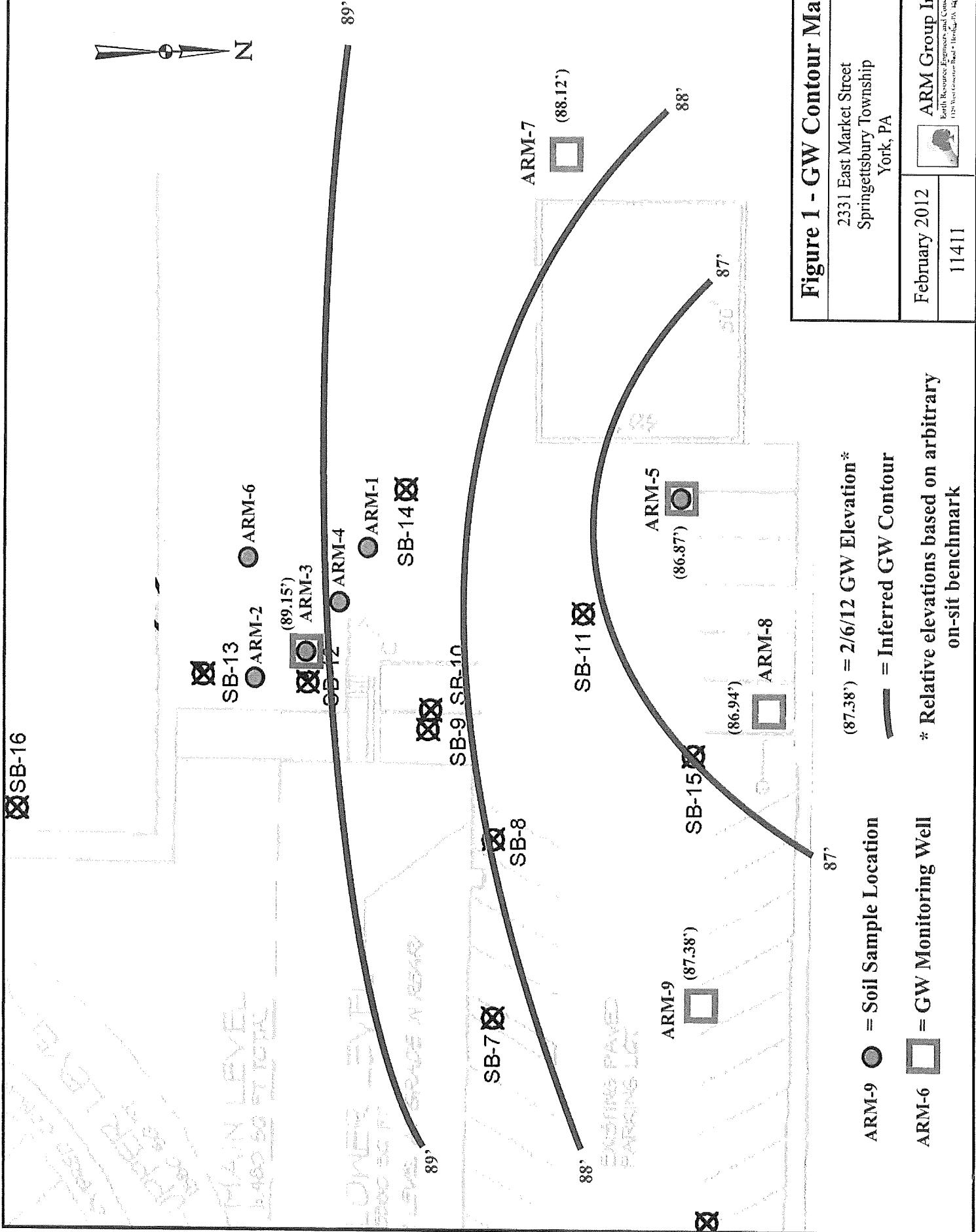


Figure 1 - GW Contour Map

2331 East Market Street
Springettsbury Township
York, PA

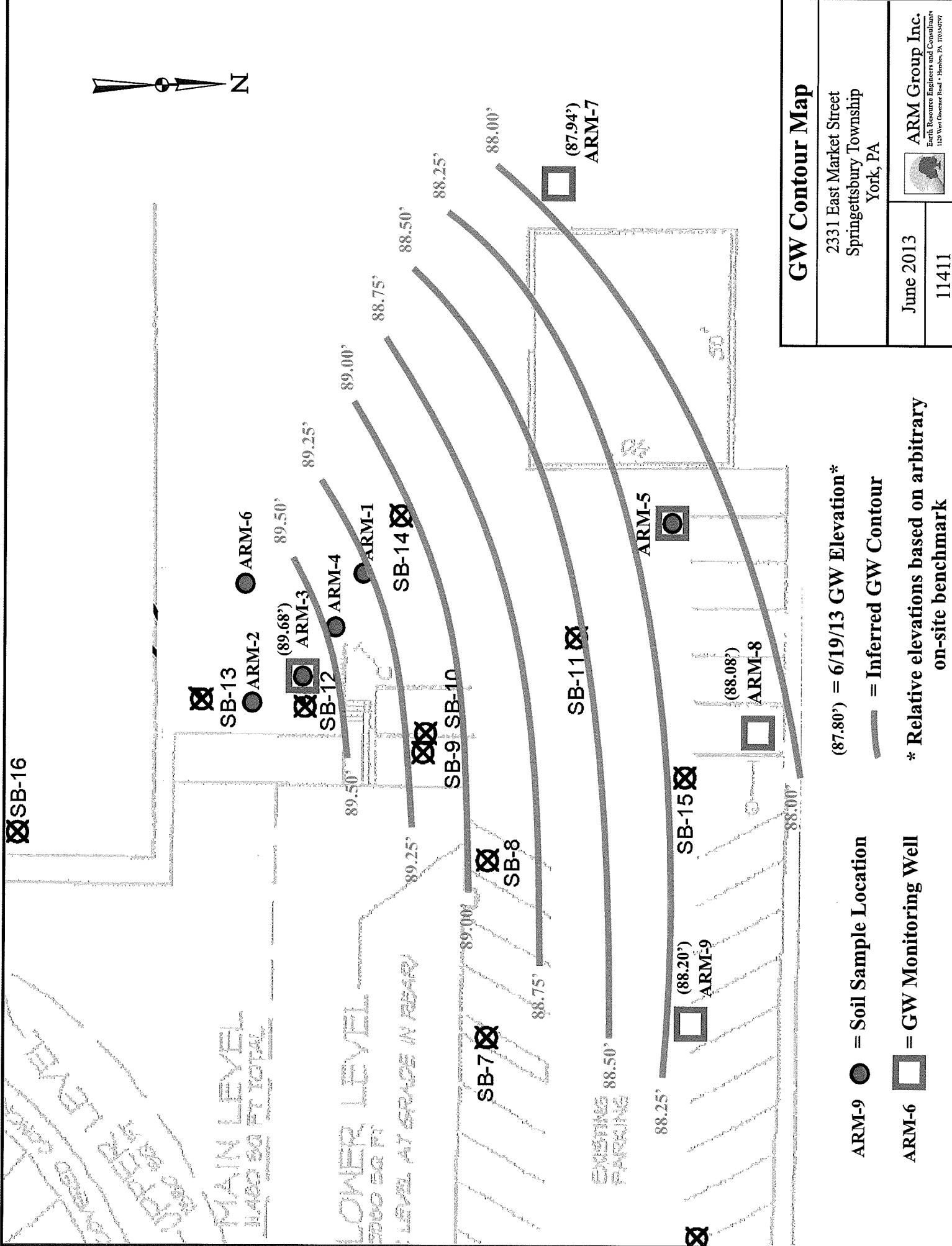
February 2012
11411

ARM Group Inc.
Earth Resource Engineers and Consultants
125 W. Lancaster Rd. • Horsham, PA 19044

* Relative elevations based on arbitrary
on-sit benchmark

SB-16

N



GW Contour Map

2331 East Market Street
Springettsbury Township
York, PA

June 2013
11411

ARM Group Inc.
Earth Resource Engineers and Consultants
1129 West Geiger Road • Hermitage, PA 16148-9776

TABLE 2
Summary of Groundwater Sample Analytical Results
2331 E Market Street, York, Pennsylvania
ARM Project Number 11411

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LAW AND POLICY IN A CHANGING ENVIRONMENT

$C = \text{Medium-specific concentration}$

residential Groundwater MSC = Medium-specific concentration; residential, used aquifer, TDS < 2500 mg/L

n-n-Residential Groundwater MSC = Medium-specific concentration; non-residential used equifor, TDS < 2500 mg/L

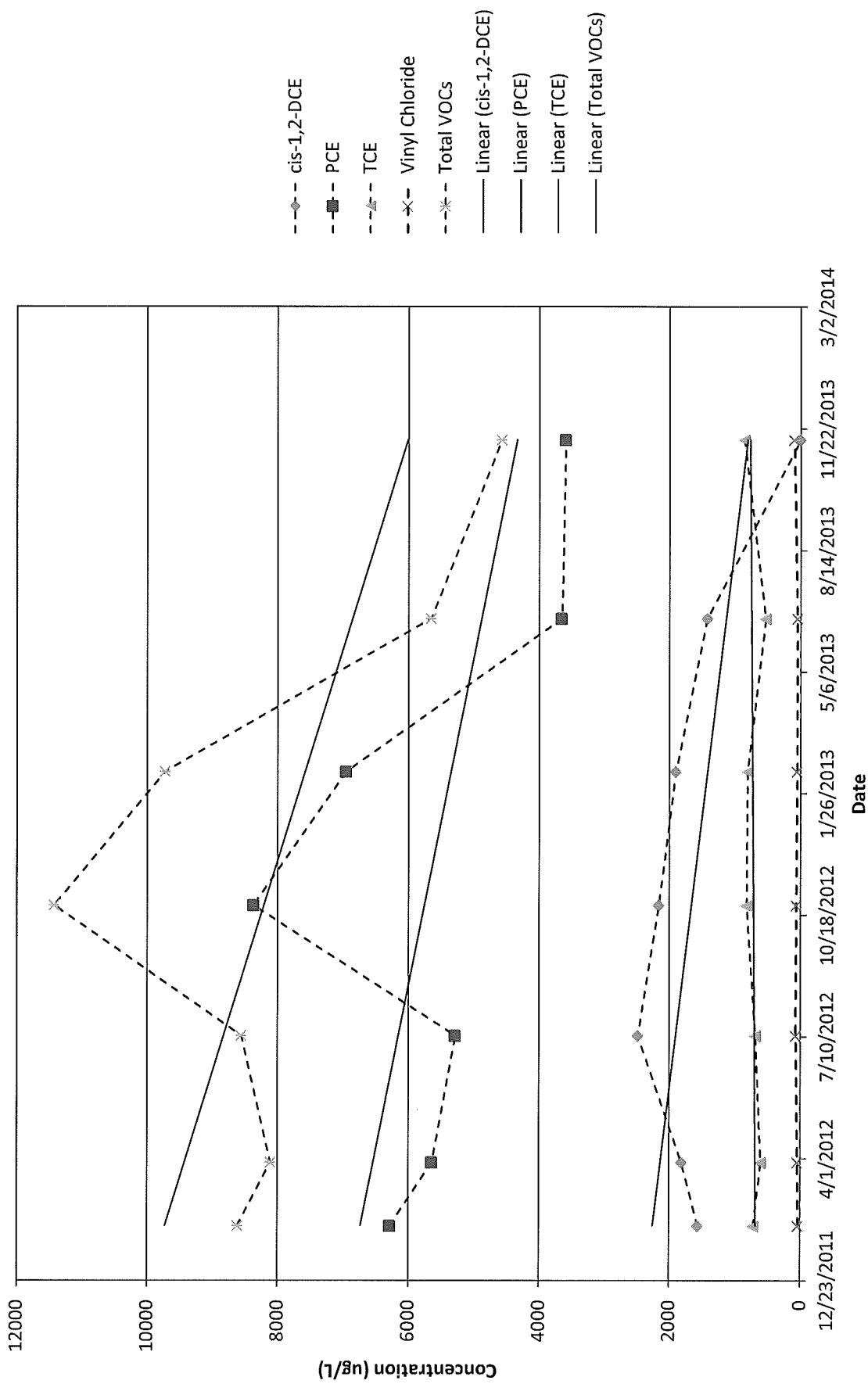
† = Parameter not detected at laboratory reporting detection limit; all detection limits were below the MSC₄.

^a Parameter not analyzed.

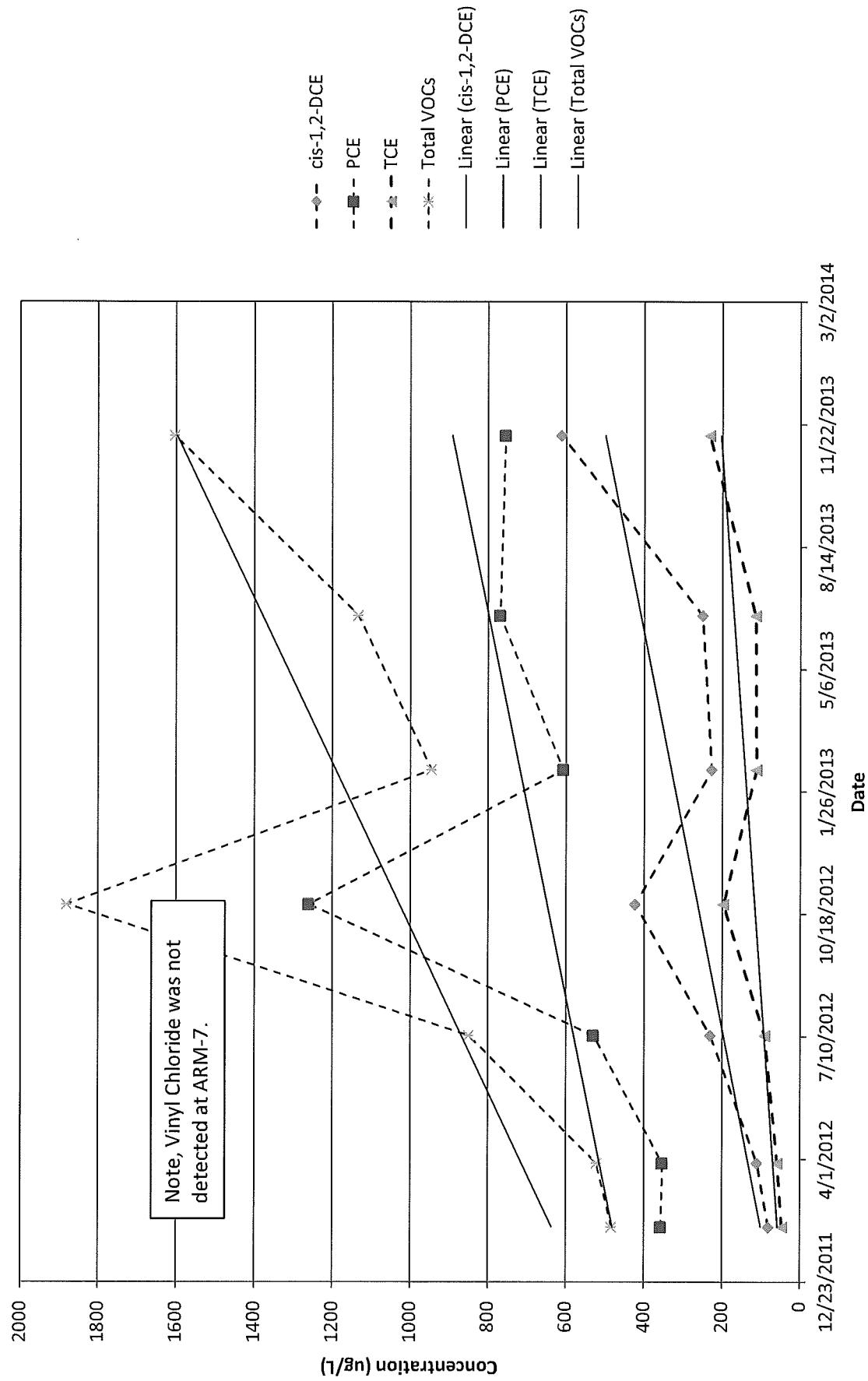
卷之三

תורת הרים ותורת נחלים: מושג ומשמעותו

ARM-3
2331 E Market Street
(ARM Project 11411)



ARM-7
2331 E Market Street
(ARM Project 11411)





ALS Environmental



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 DoD ELAP: A2LA 0818.01

State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

June 25, 2013

Ms. Julie Stahl
ARM Group
1129 W. Governor Road
PO Box 797
Hershey, PA 17033

Certificate of Analysis

Project Name: **2331 E Market Street**

Workorder: **1033265**

Purchase Order: **11411**

Workorder ID: **2331 E Market Street**

Dear Ms. Stahl,

Enclosed are the analytical results for samples received by the laboratory on Wednesday, June 19, 2013.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS York: 978 Loucks Mill Road, York, PA 17402 717-505-5280

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Matt Bixler, Mr. Jeremy Byler, Mr. Brad Sick, Mr. Steve Fulton

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental Laboratory Locations Across North America

Canada: Burlington • Calgary • Centre of Excellence • Edmonton • Fort McMurray • Fort St. John • Grande Prairie • London • Mississauga • Richmond Hill • Saskatoon • Thunder Bay
Vancouver • Waterloo • Winnipeg • Yellowknife United States: Cincinnati • Everett • Fort Collins • Holland • Houston • Middletown • Salt Lake City • Spring City • York Mexico: Monterrey

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 DoD ELAP: A2LA 0818.01

State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 1033265 2331 E Market Street

Discard Date: 07/09/2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1033265001	ARM - 3	Ground Water	6/19/13 11:30	6/19/13 12:45	Kevin Smith
1033265002	ARM - 7	Ground Water	6/19/13 10:40	6/19/13 12:45	Kevin Smith
1033265003	ARM - 8	Ground Water	6/19/13 10:00	6/19/13 12:45	Kevin Smith
1033265004	ARM - 9	Ground Water	6/19/13 09:25	6/19/13 12:45	Kevin Smith

Workorder Comments:

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

ALS Environmental Laboratory Locations Across North America

Canada: Burlington • Calgary • Centre of Excellence • Edmonton • Fort McMurray • Fort St. John • Grande Prairie • London • Mississauga • Richmond Hill • Saskatoon • Thunder Bay
Vancouver • Waterloo • Winnipeg • Yellowknife United States: Cincinnati • Everett • Fort Collins • Holland • Houston • Middletown • Salt Lake City • Spring City • York Mexico: Monterrey



ALS Environmental



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265001	Date Collected:	6/19/2013 11:30	Matrix:	Ground Water
Sample ID:	ARM - 3	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	50.0	SW846 8260B		6/25/13 03:47	GLQ A
Benzene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Bromoform	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Bromomethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
2-Butanone	ND		ug/L	50.0	SW846 8260B		6/25/13 03:47	GLQ A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Chloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Chloroform	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Chloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		6/25/13 03:47	GLQ A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
cis-1,2-Dichloroethene	1420		ug/L	100	SW846 8260B		6/25/13 04:09	GLQ A
trans-1,2-Dichloroethene	11.2		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		6/25/13 03:47	GLQ A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		6/25/13 03:47	GLQ A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Styrene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Tetrachloroethene	3650		ug/L	100	SW846 8260B		6/25/13 04:09	GLQ A
Toluene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Total Xylenes	ND		ug/L	15.0	SW846 8260B		6/25/13 03:47	GLQ A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Trichloroethene	529		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
Vinyl Chloride	43.1		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
o-Xylene	ND		ug/L	5.0	SW846 8260B		6/25/13 03:47	GLQ A
mp-Xylene	ND		ug/L	10.0	SW846 8260B		6/25/13 03:47	GLQ A

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265001	Date Collected:	6/19/2013 11:30	Matrix:	Ground Water
Sample ID:	ARM - 3	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed By</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	86.8	%	%	62-133	SW846 8260B			6/25/13 03:47	GLQ A
4-Bromofluorobenzene (S)	92.8	%	%	79-114	SW846 8260B			6/25/13 03:47	GLQ A
Dibromofluoromethane (S)	82.3	%	%	78-116	SW846 8260B			6/25/13 03:47	GLQ A
Toluene-d8 (S)	86.6	%	%	76-127	SW846 8260B			6/25/13 03:47	GLQ A
1,2-Dichloroethane-d4 (S)	87.7	%	%	62-133	SW846 8260B			6/25/13 04:09	GLQ A
4-Bromofluorobenzene (S)	93	%	%	79-114	SW846 8260B			6/25/13 04:09	GLQ A
Dibromofluoromethane (S)	84.2	%	%	78-116	SW846 8260B			6/25/13 04:09	GLQ A
Toluene-d8 (S)	86.5	%	%	76-127	SW846 8260B			6/25/13 04:09	GLQ A

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Methods for the analysis of volatile organics require that the sample be preserved to a pH less than 2 using HCl. This sample had a pH greater than 2 when received by the lab.

Anna G Milliken
 Technical Manager

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID: **1033265002** Date Collected: 6/19/2013 10:40 Matrix: Ground Water
 Sample ID: **ARM - 7** Date Received: 6/19/2013 12:45

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	50.0	SW846 8260B		6/25/13 04:32	GLQ A
Benzene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Bromoform	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Bromomethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
2-Butanone	ND		ug/L	50.0	SW846 8260B		6/25/13 04:32	GLQ A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Chloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Chloroform	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Chloromethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		6/25/13 04:32	GLQ A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
cis-1,2-Dichloroethene	250		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
trans-1,2-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		6/25/13 04:32	GLQ A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		6/25/13 04:32	GLQ A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Styrene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Tetrachloroethene	769		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Toluene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Total Xylenes	ND		ug/L	15.0	SW846 8260B		6/25/13 04:32	GLQ A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Trichloroethene	114		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
Vinyl Chloride	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
o-Xylene	ND		ug/L	5.0	SW846 8260B		6/25/13 04:32	GLQ A
mp-Xylene	ND		ug/L	10.0	SW846 8260B		6/25/13 04:32	GLQ A

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID: 1033265002 Date Collected: 6/19/2013 10:40 Matrix: Ground Water
Sample ID: ARM - 7 Date Received: 6/19/2013 12:45

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	87.1	%	62-133	SW846 8260B		6/25/13 04:32	GLQ	A	
4-Bromofluorobenzene (S)	93.7	%	79-114	SW846 8260B		6/25/13 04:32	GLQ	A	
Dibromofluoromethane (S)	84.8	%	78-116	SW846 8260B		6/25/13 04:32	GLQ	A	
Toluene-d8 (S)	86.9	%	76-127	SW846 8260B		6/25/13 04:32	GLQ	A	

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Methods for the analysis of volatile organics require that the sample be preserved to a pH less than 2 using HCl. This sample had a pH greater than 2 when received by the lab.

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265003	Date Collected:	6/19/2013 10:00	Matrix:	Ground Water
Sample ID:	ARM - 8	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B	6/25/13 04:54	GLQ	A
Benzene	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Bromoform	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Bromomethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
2-Butanone	ND		ug/L	10.0	SW846 8260B	6/25/13 04:54	GLQ	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Chloroethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Chloroform	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Chloromethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B	6/25/13 04:54	GLQ	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
cis-1,2-Dichloroethene	1.5		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B	6/25/13 04:54	GLQ	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B	6/25/13 04:54	GLQ	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Styrene	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Tetrachloroethene	13.3		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Toluene	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B	6/25/13 04:54	GLQ	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Trichloroethene	1.4		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
o-Xylene	ND		ug/L	1.0	SW846 8260B	6/25/13 04:54	GLQ	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B	6/25/13 04:54	GLQ	A

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID: 1033265003 Date Collected: 6/19/2013 10:00 Matrix: Ground Water
Sample ID: ARM - 8 Date Received: 6/19/2013 12:45

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	88.4	%	62-133	SW846 8260B		6/25/13 04:54	GLQ	A	
4-Bromofluorobenzene (S)	93.3	%	79-114	SW846 8260B		6/25/13 04:54	GLQ	A	
Dibromofluoromethane (S)	84.1	%	78-116	SW846 8260B		6/25/13 04:54	GLQ	A	
Toluene-d8 (S)	86	%	76-127	SW846 8260B		6/25/13 04:54	GLQ	A	

Sample Comments:

Anna G. Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID:	1033265004	Date Collected:	6/19/2013 09:25	Matrix:	Ground Water
Sample ID:	ARM - 9	Date Received:	6/19/2013 12:45		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		6/25/13 05:17	GLQ A
Benzene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Bromoform	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Bromomethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
2-Butanone	ND		ug/L	10.0	SW846 8260B		6/25/13 05:17	GLQ A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Chloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Chloroform	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Chloromethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		6/25/13 05:17	GLQ A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		6/25/13 05:17	GLQ A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		6/25/13 05:17	GLQ A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Styrene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Tetrachloroethene	10.1		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Toluene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		6/25/13 05:17	GLQ A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Trichloroethene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
o-Xylene	ND		ug/L	1.0	SW846 8260B		6/25/13 05:17	GLQ A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		6/25/13 05:17	GLQ A

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ANALYTICAL RESULTS

Workorder: 1033265 2331 E Market Street

Lab ID: 1033265004 Date Collected: 6/19/2013 09:25 Matrix: Ground Water
Sample ID: ARM - 9 Date Received: 6/19/2013 12:45

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
<i>Surrogate Recoveries</i>								
1,2-Dichloroethane-d4 (S)	87.3	%	62-133	SW846 8260B		6/25/13 05:17	GLQ	A
4-Bromofluorobenzene (S)	93.1	%	79-114	SW846 8260B		6/25/13 05:17	GLQ	A
Dibromofluoromethane (S)	83.4	%	78-116	SW846 8260B		6/25/13 05:17	GLQ	A
Toluene-d8 (S)	86.6	%	76-127	SW846 8260B		6/25/13 05:17	GLQ	A

Sample Comments:

Anna G Milliken
Technical Manager

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CHAIN OF CUSTODY REQUEST FOR ANALYSIS

All Sampled Areas Must Be Completed By The Client!



34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

Co. Name: AR77 Group Inc.
Contact Person: Kevin Smith
Address: 1129 West Governor St.
Hershey, PA 17033

Phone: 610 505 0569

Bill To Address (or Report):

PO#:

Project Name #: AR77-3 Entered 1/14/11 ALS Quote #:

TAT: Item Sampling TAT is 10-12 business days.
 Item Subject to ALS approval and scheduling.

Date Required:

Approved By:

Email: ksmith@orangegroup.net
Fax: Y. No.

Sample Description/Location

CC Comments

Sample Date

Method

Time

MAX

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MIN

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AM

PM

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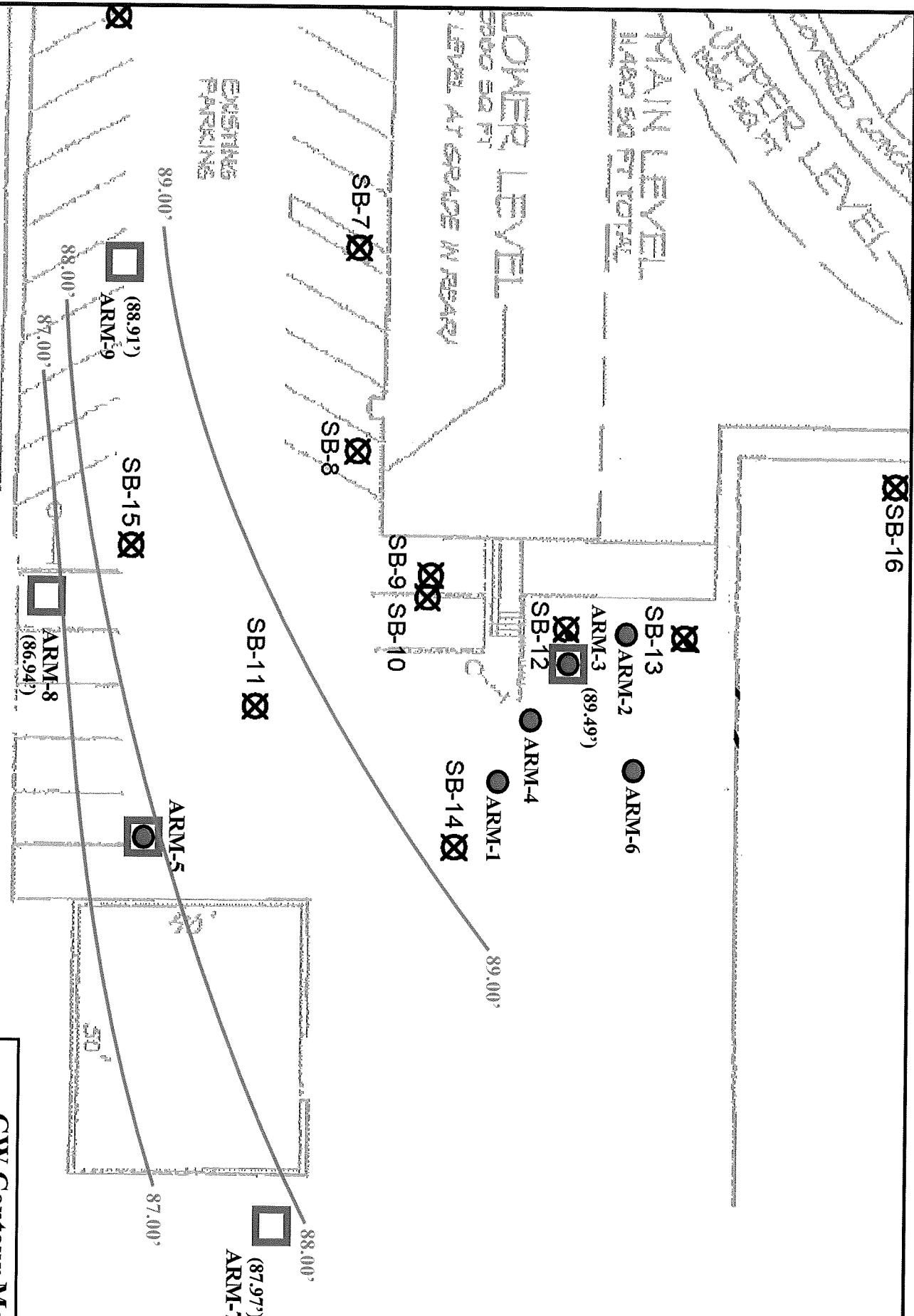
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SB-16



(88.91') = 11/13/13 GW Elevation*

ARM-9 ● = Soil Sample Location

— = Inferred GW Contour

* Relative elevations based on arbitrary
on-site benchmark

GW Contour Map	
2331 East Market Street Springetsbury Township York, PA	
November 2013	ARM Group Inc. Earth Resource Engineers and Consultants 112 West Governor Road • Hanover, PA 17330-3979
11411	



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November 22, 2013

Mr. Steve Fulton
ARM Group
1129 W. Governor Road
PO Box 797
Hershey, PA 17033

Certificate of Analysis

Project Name: **Rock Commercial**
Purchase Order: **11411**

Workorder: **1058304**
Workorder ID: **Rock Commercial**

Dear Mr. Fulton,

Enclosed are the analytical results for samples received by the laboratory on Wednesday, November 13, 2013.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS York: 978 Loucks Mill Road, York, PA 17402 717-505-5280

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

*This page is included as part of the Analytical Report and
must be retained as a permanent record thereof.*

Susan Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 1058304 Rock Commercial

Discard Date: 12/06/2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1058304001	ARM-8	Ground Water	11/13/13 10:50	11/13/13 15:15	Christine Iozza
1058304002	ARM-9	Ground Water	11/13/13 11:35	11/13/13 15:15	Christine Iozza
1058304003	ARM-7	Ground Water	11/13/13 12:25	11/13/13 15:15	Christine Iozza
1058304004	ARM-3	Ground Water	11/13/13 12:55	11/13/13 15:15	Christine Iozza

Workorder Comments:

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304001	Date Collected:	11/13/2013 10:50	Matrix:	Ground Water
Sample ID:	ARM-8	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		11/20/13 19:33	CJG A
Benzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Bromoform	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Bromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
2-Butanone	ND		ug/L	10.0	SW846 8260B		11/20/13 19:33	CJG A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Chloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Chloroform	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Chloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		11/20/13 19:33	CJG A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
cis-1,2-Dichloroethene	26.2		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		11/20/13 19:33	CJG A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Freon 113	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		11/20/13 19:33	CJG A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		11/20/13 19:33	CJG A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		11/20/13 19:33	CJG A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG A

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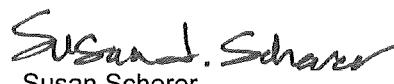
ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID: **1058304001** Date Collected: 11/13/2013 10:50 Matrix: Ground Water
 Sample ID: **ARM-8** Date Received: 11/13/2013 15:15

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
Styrene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG	A
Tetrachloroethene	104	1	ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:33	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:33	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG	A
Trichloroethene	16.9		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:33	CJG	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:33	CJG	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	By	Cntr
1,2-Dichloroethane-d4 (S)	91.2		%	62-133	SW846 8260B		11/20/13 19:33	CJG	A
4-Bromofluorobenzene (S)	103		%	79-114	SW846 8260B		11/20/13 19:33	CJG	A
Dibromofluoromethane (S)	95.6		%	78-116	SW846 8260B		11/20/13 19:33	CJG	A
Toluene-d8 (S)	98.5		%	76-127	SW846 8260B		11/20/13 19:33	CJG	A

Sample Comments:


 Susan Scherer
 Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304002	Date Collected:	11/13/2013 11:35	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		11/20/13 19:55	CJG A
Benzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Bromoform	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Bromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
2-Butanone	ND		ug/L	10.0	SW846 8260B		11/20/13 19:55	CJG A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Chloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Chloroform	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Chloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		11/20/13 19:55	CJG A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
cis-1,2-Dichloroethene	7.2		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		11/20/13 19:55	CJG A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Freon 113	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		11/20/13 19:55	CJG A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		11/20/13 19:55	CJG A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		11/20/13 19:55	CJG A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG A

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304002	Date Collected:	11/13/2013 11:35	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
Styrene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG	A
Tetrachloroethene	57.0	1	ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:55	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:55	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG	A
Trichloroethene	4.9		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		11/20/13 19:55	CJG	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		11/20/13 19:55	CJG	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	By	Cntr
1,2-Dichloroethane-d4 (S)	90.4		%	62-133	SW846 8260B		11/20/13 19:55	CJG	A
4-Bromofluorobenzene (S)	102		%	79-114	SW846 8260B		11/20/13 19:55	CJG	A
Dibromofluoromethane (S)	94.8		%	78-116	SW846 8260B		11/20/13 19:55	CJG	A
Toluene-d8 (S)	98.7		%	76-127	SW846 8260B		11/20/13 19:55	CJG	A

Sample Comments:


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 Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304003	Date Collected:	11/13/2013 12:25	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		11/20/13 20:17	CJG A
Benzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Bromoform	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Bromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
2-Butanone	ND		ug/L	10.0	SW846 8260B		11/20/13 20:17	CJG A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Chloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Chloroform	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Chloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		11/20/13 20:17	CJG A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
cis-1,2-Dichloroethene	611		ug/L	100	SW846 8260B		11/21/13 21:11	CJG B
trans-1,2-Dichloroethene	4.9		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		11/20/13 20:17	CJG A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Freon 113	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		11/20/13 20:17	CJG A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		11/20/13 20:17	CJG A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		11/20/13 20:17	CJG A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 20:17	CJG A

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID: 1058304003 Date Collected: 11/13/2013 12:25 Matrix: Ground Water
Sample ID: ARM-7 Date Received: 11/13/2013 15:15

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
Styrene	ND		ug/L	1.0	SW846 8260B			11/20/13 20:17	CJG A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B			11/20/13 20:17	CJG A
Tetrachloroethene	755		ug/L	100	SW846 8260B			11/21/13 21:11	CJG B
Toluene	ND		ug/L	1.0	SW846 8260B			11/20/13 20:17	CJG A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			11/20/13 20:17	CJG A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B			11/20/13 20:17	CJG A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			11/20/13 20:17	CJG A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B			11/20/13 20:17	CJG A
Trichloroethene	232		ug/L	100	SW846 8260B			11/21/13 21:11	CJG B
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			11/20/13 20:17	CJG A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			11/20/13 20:17	CJG A
o-Xylene	ND		ug/L	1.0	SW846 8260B			11/20/13 20:17	CJG A
mp-Xylene	ND		ug/L	2.0	SW846 8260B			11/20/13 20:17	CJG A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	By	Cntr
1,2-Dichloroethane-d4 (S)	90.1		%	62-133	SW846 8260B			11/20/13 20:17	CJG A
4-Bromofluorobenzene (S)	102		%	79-114	SW846 8260B			11/20/13 20:17	CJG A
Dibromofluoromethane (S)	97.2		%	78-116	SW846 8260B			11/20/13 20:17	CJG A
Toluene-d8 (S)	99.7		%	76-127	SW846 8260B			11/20/13 20:17	CJG A
1,2-Dichloroethane-d4 (S)	115		%	62-133	SW846 8260B			11/21/13 21:11	CJG B
4-Bromofluorobenzene (S)	108		%	79-114	SW846 8260B			11/21/13 21:11	CJG B
Dibromofluoromethane (S)	80		%	78-116	SW846 8260B			11/21/13 21:11	CJG B
Toluene-d8 (S)	96.9		%	76-127	SW846 8260B			11/21/13 21:11	CJG B

Sample Comments:

Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304004	Date Collected:	11/13/2013 12:55	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		11/20/13 20:39	CJG A
Benzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Bromoform	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Bromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
2-Butanone	ND		ug/L	10.0	SW846 8260B		11/20/13 20:39	CJG A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Chloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Chloroform	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Chloromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		11/20/13 20:39	CJG A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,2-Dichlorobenzene	1.1		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,1-Dichloroethene	3.7		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
trans-1,2-Dichloroethene	28.4		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		11/20/13 20:39	CJG A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Freon 113	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		11/20/13 20:39	CJG A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		11/20/13 20:39	CJG A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		11/20/13 20:39	CJG A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG A

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ANALYTICAL RESULTS

Workorder: 1058304 Rock Commercial

Lab ID:	1058304004	Date Collected:	11/13/2013 12:55	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	11/13/2013 15:15		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	By	Cntr
Styrene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
Tetrachloroethylene	3590		ug/L	100	SW846 8260B		11/21/13 21:28	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 20:39	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		11/20/13 20:39	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
Trichloroethylene	853		ug/L	100	SW846 8260B		11/21/13 21:28	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
Vinyl Chloride	95.2		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		11/20/13 20:39	CJG	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		11/20/13 20:39	CJG	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	By	Cntr
1,2-Dichloroethane-d4 (S)	89.3		%	62-133	SW846 8260B		11/20/13 20:39	CJG	A
4-Bromofluorobenzene (S)	104		%	79-114	SW846 8260B		11/20/13 20:39	CJG	A
Dibromofluoromethane (S)	97.1		%	78-116	SW846 8260B		11/20/13 20:39	CJG	A
Toluene-d8 (S)	101		%	76-127	SW846 8260B		11/20/13 20:39	CJG	A
1,2-Dichloroethane-d4 (S)	115		%	62-133	SW846 8260B		11/21/13 21:28	CJG	B
4-Bromofluorobenzene (S)	101		%	79-114	SW846 8260B		11/21/13 21:28	CJG	B
Dibromofluoromethane (S)	81.7		%	78-116	SW846 8260B		11/21/13 21:28	CJG	B
Toluene-d8 (S)	96.7		%	76-127	SW846 8260B		11/21/13 21:28	CJG	B

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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 1058304 Rock Commercial

PARAMETER QUALIFIERS\FLAGS

- [1] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Tetrachloroethene. The % Recovery was reported as 174 and the control limits were 72 to 124.

ALS Environmental Laboratory Locations Across North America

Canada: Burlington • Calgary • Centre of Excellence • Edmonton • Fort McMurray • Fort St. John • Grande Prairie • London • Mississauga • Richmond Hill • Saskatoon • Thunder Bay
Vancouver • Waterloo • Winnipeg • Yellowknife United States: Cincinnati • Everett • Fort Collins • Holland • Houston • Middletown • Salt Lake City • Spring City • York Mexico: Monterrey



Environmental



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01

State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

 CHAIN OF CUSTODY REQUEST FOR ANALYSIS <small>ALL SHADED AREAS MUST BE COMPLETED BY THE LABORATORY</small> <small>SAMPLER INSTRUCTIONS ON THE BACK</small>		Page <u>1</u> of <u>1</u> Counter: _____ Tracking #: _____																																																																							
<p>Co. Name: ARM Group Inc. Contact Person: Steve Fulton Address: 1129 W. Goufford Rd. Hershey, PA 17033-0797 Bill to Reference Report #: PO# 114411</p>		<p>Phone: (717) 533-8800 Type: CG Location: HCI Pesticide: PCP</p>																																																																							
<p>ANALYSIS/METHOD REQUESTED</p> <p>92810C5617C7</p>		<table border="1"> <thead> <tr> <th colspan="2">Enter Number of Containers Per Analysis</th> </tr> </thead> <tbody> <tr> <td>Sample Description/Location</td> <td>QC Comments</td> </tr> <tr> <td>ARM - 8</td> <td>1/3/13 105.0 g SW 2</td> </tr> <tr> <td>ARM - 9</td> <td>1/3/13 135.0 g SW 2</td> </tr> <tr> <td>ARM - 7</td> <td>1/3/13 225.0 g SW 2</td> </tr> <tr> <td>ARM - 3</td> <td>1/3/13 165.0 g SW 2</td> </tr> <tr> <td>5</td> <td>REMOVED</td> </tr> <tr> <td>6</td> <td>REMOVED</td> </tr> <tr> <td>7</td> <td>REMOVED</td> </tr> <tr> <td>8</td> <td>REMOVED</td> </tr> </tbody> </table>		Enter Number of Containers Per Analysis		Sample Description/Location	QC Comments	ARM - 8	1/3/13 105.0 g SW 2	ARM - 9	1/3/13 135.0 g SW 2	ARM - 7	1/3/13 225.0 g SW 2	ARM - 3	1/3/13 165.0 g SW 2	5	REMOVED	6	REMOVED	7	REMOVED	8	REMOVED																																																		
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<p>Project Name#: Rock Commerce ALS Quote #: 114411</p> <p>TAT: <input checked="" type="checkbox"/> 10 business days. <input type="checkbox"/> Rush Subject to ALS approved surcharges.</p> <p>Entered By: J. No.</p>		<p>Date Requested: _____ Approved By: _____</p>																																																																							
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<p>SAMPLED BY (Please Print): John M. Toda</p> <p>Received By/ Company Name: John M. Toda</p> <p>Date / Time: 1/13/13 1515 Received By/ Company Name: John M. Toda</p>																																																																									
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<p>DATA DELIVERABLES</p> <p>Standard: <input type="checkbox"/> CLP: <input type="checkbox"/> NFPA: <input type="checkbox"/> EDMS: <input type="checkbox"/></p> <p>Transf. yes: <input type="checkbox"/> no: <input type="checkbox"/> yes: <input type="checkbox"/> no: <input type="checkbox"/> yes: <input type="checkbox"/> no: <input type="checkbox"/></p> <p>NIJ Required: <input type="checkbox"/> NIFU: <input type="checkbox"/> Lab: <input type="checkbox"/> NY: <input type="checkbox"/> PA: <input type="checkbox"/></p> <p>CEPA: <input type="checkbox"/> RCRA: <input type="checkbox"/> FIFRA: <input type="checkbox"/> DOD: <input type="checkbox"/></p> <p>CEPA: <input type="checkbox"/> RCRA: <input type="checkbox"/> FIFRA: <input type="checkbox"/> DOD: <input type="checkbox"/></p>																																																																									
<p>DO YOU HAVE ANY QUESTIONS?</p> <p>*GEORGIA PERMIT NUMBER: NRIC-AZ0015 OTHER LICENSES: SL-SOILS, SL-ROCKS, SL-PLASTICS, SL-PLASTIC, GROWING MEDIUM, OTHER LIQUIDS, OTHER SOLIDS, OTHER MATERIALS, OTHER SUBSTANCES</p> <p>CONTAINER TYPE: AC-PLASTIC GREEN CO-COPPER GLASS, PL-PLASTIC, GROWING MEDIUM, SPINNED, SL-SOILS, SL-PLASTICS, HOLLOW NEON, etc.</p>																																																																									

APPENDIX C
Notice of Intent to Remediate
And Administrative Notifications



For DEP Use Only

PF # _____

Rem ID # _____

NOTICE OF INTENT TO REMEDIATE

Act 1995-2 requires four general information items to be included in the NIR: the general location, listing of contaminants, intended use of property, and proposed remediation measures. In addition, indicate the standard(s) to be obtained (if known) and attach a scaled site map (if available).

Property Name 2331 E. Market Street

Former Name(s) / AKA 2331 E. Market Street

Address / Location 2331 E. Market Street

City York Zip Code 17402

Municipality(s) Springettsbury Township County(ies) York

Latitude 39 ° (deg). 58 ' (min) 28.41 " (sec) Longitude 76 ° (deg). 40 ' (min) 54.43 " (sec)

Horizontal Collection Method USGS 7.5 Minute Topo Quad of West York (Terrain Navigator Application)

Horizontal Reference Datum NAD83 Reference Point Center of Site

Wish to participate in the DEP/EPA MOA. Contact Troy Conrad at tconrad@state.pa.us for details.

EPA ID#, if known _____

DEP ID#(s), if known _____
(i.e., eFACTS site ID#, storage tank facility ID#, water quality permit #, watershed permit, air quality permit #, etc.)

Date Release Occurred (if known) _____

Provide a brief description of the site contamination in plain language (e.g. fuel oil spill, historical chemical industrial area contamination), the names of any known primary contaminants to be addressed, and the intended future use of the property.

Based on soil and groundwater sampling at the site, soils and groundwater have been impacted with volatile organic compounds, most notably tetrachloroethylene (PCE) and trichloroethylene (TCE), believed to be associated with historic dry cleaning operations at the site. The site is planned to continue to be used for non-residential, commercial activities.

Provide a general description of proposed remediation measures.

The site remediation activities are expected to include institutional controls and natural attenuation, possibly with some limited soil or groundwater treatment if needed, to demonstrate attainment of the Act 2 site-specific standard for organic contaminants detected in soils and groundwater. Attainment of the Act 2 statewide health standard will be demonstrated for some constituents detected in soil and groundwater.

Remediation Standard(s) planned (if known at this time):

- | | | |
|---|--|---|
| <input type="checkbox"/> Unknown at this time | <input type="checkbox"/> Soil | <input type="checkbox"/> Groundwater |
| <input type="checkbox"/> Background Contaminants: | <input type="checkbox"/> Soil | <input type="checkbox"/> Groundwater |
| <input checked="" type="checkbox"/> Statewide Health - Residential Contaminants: tetrachloroethylene (PCE); trichloroethylene (TCE); cis-1,2-dichloroethane; vinyl chloride | <input checked="" type="checkbox"/> Soil | <input checked="" type="checkbox"/> Groundwater |
| <input type="checkbox"/> Statewide Health – Non-Residential Contaminants: | <input type="checkbox"/> Soil | <input type="checkbox"/> Groundwater |
| <input checked="" type="checkbox"/> Site Specific Contaminants: tetrachloroethylene (PCE); trichloroethylene (TCE); cis-1,2-dichloroethane; vinyl chloride | <input checked="" type="checkbox"/> Soil | <input checked="" type="checkbox"/> Groundwater |
| <input type="checkbox"/> Special Industrial Area* Contaminants: | <input type="checkbox"/> Soil | <input type="checkbox"/> Groundwater |

*NOTE: Specific standard or Special Industrial Area require a 30-day municipal comment period

Remediator / Property Owner / Consultant. Complete the form below for each recipient obtaining a release of liability upon approval of the final report. Attach additional sheets as necessary.**Remediator**

Contact Person/Title <u>Barbara Elliott</u>	eFACTS Client ID* _____
Relationship to Site <u>Owner</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* <u>Individual</u>
Phone Number <u>717-332-5084</u>	Email Address <u>chiped@aol.com</u>
Company Name _____	EIN or Federal ID # _____

Property Owner

Contact Person/Title <u>Barbara Elliott</u>	eFACTS Client ID* _____
Relationship to Site <u>Owner</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* <u>Individual</u>
Phone Number <u>717-332-5084</u>	Email Address <u>chiped@aol.com</u>
Company Name _____	EIN or Federal ID # _____

Consultant

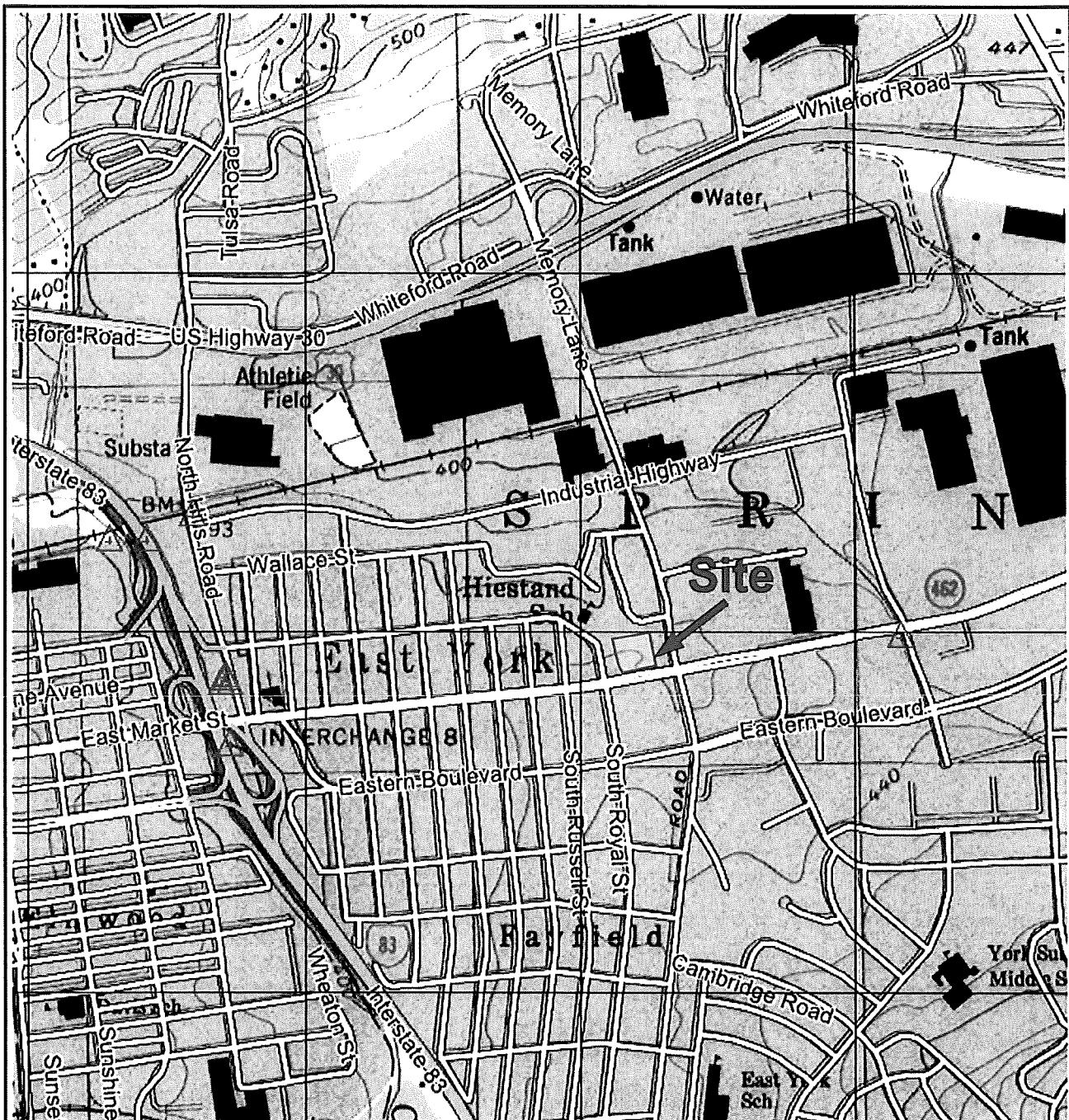
Contact Person/Title <u>Stephen Fulton/VP - Environmental Services</u>	eFACTS Client ID* _____
Relationship to Site <u>Consultant</u> (e.g. owner, remediator, participant in cleanup, consultant, etc.)	Client Type* <u>Pennsylvania Corporation</u>
Phone Number <u>717-508-0521</u>	Email Address <u>sfulton@armgroup.net</u>
Company Name <u>ARM Group, Inc.</u>	EIN or Federal ID # <u>25-1807594</u>

*Include eFACTS Client ID (if known) – "Client Types" below:

Association/Organization	Limited Liability company	Partnership-General
Authority	Limited Liability Partnership	Partnership-Limited
County	Municipality	School District
Estate/Trust	Non-Pennsylvania Government	Sole Proprietorship
Federal Agency	Other (Non-Government)	State Agency
Individual	Pennsylvania Corporation	

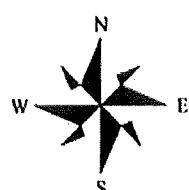
Preparer of Notice of Intent to Remediate

Name <u>Stephen B. Fulton, P.G.</u>	Title <u>Vice President - Environmental Services</u>
Phone Number <u>717-508-0521</u>	Email Address <u>sfulton@armgroup.net</u>
Company Name <u>ARM Group, Inc.</u>	eFACTS Client ID _____
Address (street, city, state, zip) <u>1129 West Governor Road, P.O. Box 797, Hershey, PA 17033</u>	



Base Map from the USGS 7.5 Minute Topographic Quadrangle of York, Pennsylvania.

Figure 1



NOT TO SCALE

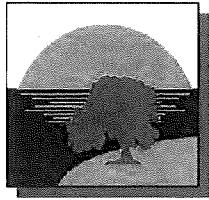
Site Location Map

2331 E. Market Street
York, PA 17402
Springettsbury Township
York County, Pennsylvania

July 2012

 **ARM Group Inc.**
Earth Resource Engineers and Consultants
1129 West Uverence Road • Hershey, PA 17033-6779

11411



ARM Group Inc.

Earth Resource Engineers and Consultants

July 26, 2012

CERTIFIED MAIL NO.: 7010 3090 0003 6625 3508

Mr. John J. Holman
Springettsbury Township
1501 Mount Zion Rd.
York, PA 17402

Re: Notice of Intent to Remediate
2331 E. Market Street
Springettsbury Township
York County, Pennsylvania
(ARM Project No. 11411)

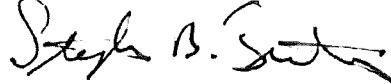
Dear Mr. Holman:

The Land Recycling and Environmental Remediation Standards Act (Act 2) requires that a Notice of Intent to Remediate (NIR) be provided to the municipality in which the site is located. Act 2 also provides that when a site is being remediated to a Site-specific Standard, the municipality is afforded a 30-day comment period. In accordance with the provisions of the Act, and on behalf of Barbara Elliot, we are formally notifying you of our intent to remediate the subject site. A copy of the NIR, which will be sent to the Pennsylvania Department of Environmental Protection (PADEP), is enclosed. This notice will be published in the Pennsylvania Bulletin, and a summary of the notice will appear in The York Daily Record, a local newspaper, on July 27, 2012.

Publication of this notice in The York Daily Record initiates the 30-day public and municipal comment period. During this time, your municipality may request to become involved in the development of the remediation and reuse plans for the site. If the municipality wishes to become involved in this project, please send your request and comments to the undersigned. Copies of these requests and of any comments can also be submitted to the Department of Environmental Protection, Southcentral Regional Office, 909 Elmerton Avenue, Harrisburg, Pennsylvania, 17110, Attention: Kathleen Horvath, P.G.

Please contact the undersigned at 717-508-0521 if you have any questions or comments regarding this notice.

Sincerely,
ARM Group Inc.


Stephen B. Fulton, P.E., P.G.
Vice President, Environmental Services

Enclosure – Notice of Intent to Remediate

cc: Mr. Ted Turnbull, ROCK Commercial Real Estate, LLC

SENDER: COMPLETE THIS SECTION

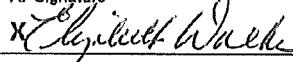
- Complete Items 1, 2, and 3. Also complete Item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

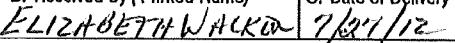
Mr John J. Holman
Springettsbury Township
1501 Mount Zion Rd.
York, PA 17402

COMPLETE THIS SECTION ON DELIVERY

A. Signature

 Agent
 Addressee

B. Received by (Printed Name)


ELIZABETH WHACKINC. Date of Delivery
7/27/12D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- | | |
|--|---|
| <input checked="" type="checkbox"/> Certified Mail | <input type="checkbox"/> Express Mail |
| <input type="checkbox"/> Registered | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Insured Mail | <input type="checkbox"/> C.O.D. |

4. Restricted Delivery? (Extra Fee) Yes2. Article Number
(Transfer from service label)

7010 3090 0003 6625 3508

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

**Public Notice of Intent to Remediate to an
Environmental Standard**

Pursuant to the Land Recycling and Environmental Remediation Standards Act, the act of May 19, 1995, P.L. 4, No. 1995-2, notice is hereby given that ARM Group Inc., on behalf of Barbara Elliot, will submit to the Pennsylvania Department of Environmental Protection (PADEP) a Notice of Intent to Remediate (NIR) for the property located at 2331 E. Market St., Springettsbury Township, York County, Pennsylvania. The NIR indicates that volatile organic compounds, including tetrachloroethylene (PCE) and trichloroethylene (TCE), are present in soil and groundwater at the site. The proposed future use of the property is for continued non-residential, commercial use.

It is currently planned that institutional controls and natural attenuation will be utilized as necessary to demonstrate attainment of a combination of the Act 2 Statewide Health Standard and the Site-Specific Standard for soils and groundwater at the site. The Act provides for a 30-day public comment period for Site-Specific Standard remediations. The 30-day comment period is initiated with the publication of this notice. Until August 25, 2012, Springettsbury Township may submit a request to ARM Group, Inc. to be involved in the development of the remediation and reuse plans for the site. Springettsbury Township may also submit a request to ARM Group, Inc. during this 30-day comment period to develop and implement a public involvement plan. The contact address for ARM Group, Inc. is P.O. Box 797, Hershey, PA, 17033, Attn: Steve Fulton. Copies of these requests and of any comments can also be submitted to the Pennsylvania Department of Environmental Protection, Southcentral Regional Office, 909 Elmerton Avenue, Harrisburg, PA, 17110, Attn: Kathy Horvath, P.G.

Proof of Publication

State of Pennsylvania

AD # 0001270625-01

Attach Copy of
Advertisement here

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The York Dispatch/York Sunday News and York Daily Record are the names of the daily newspaper(s) of general circulation published continuously for more than six months at its principal place of business, 1891 Loucks Road, York, PA 17408.

The printed copy of the advertisement hereto attached is a true copy, exactly as printed and published, of an advertisement printed in the regular issues of the said The York Dispatch/York Sunday News and York Daily Record published on the following dates, viz:

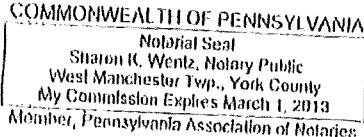
7/27/2012

COMMONWEALTH OF PENNSYLVANIA COUNTY OF YORK

Before me, a Notary Public, personally came Linda Smith who being duly sworn deposes and says that she is the Layout Supervisor of The York Dispatch/York Sunday News and York Daily Record and her personal knowledge of the publication of the advertisement mentioned in the foregoing statement as to the time, place and character of publications are true, and that the affiant is not interested in the subject matter of the above mentioned advertisement.

Sworn and subscribed to before me, on
this 27 day of July 2012

Sharon K. Wentz } Bethany Smith
Notary Public



The charge for the following publication of above mentioned advertisement and the expense of the affidavit.

Advertisement Cost	\$273.00
Affidavit Fee	5.00
Total Cost	\$278.00

APPENDIX D
Relevant Work Products of Geo-Technology Associates, Inc.

Well Logs & Well Construction

LOG OF WELL NO. GTA-10

Sheet 1 of 1

PROJECT: **East Market Street**
 PROJECT NO.: **141834**
 PROJECT LOCATION: **2331 E. Market Street**

WATER LEVEL (ft):   
 DATE: _____
 CAVED (ft): _____

DATE STARTED: **11/12/14**
 DATE COMPLETED: **11/13/14**
 DRILLING CONTRACTOR: **Eichelbergers, Inc.**
 EQUIPMENT: **Schramm T555**
 DRILLER: **Tim Westover**
 DRILLING METHOD: **Air Hammer**
 BORING DIA (in): **10**
 CASING TYPE: **Steel**
 SCREEN TYPE: **PVC**
 SAMPLING METHOD: **Grab**
 Casing Dia (in.): **6**
 Screen Slot Size(in): **0.020"**
 Casing Len. (ft.): **20**
 Screen Len. (ft.): **15**

SAMPLE NUMBER	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft.)	ELEVATION (ft.)	DEPTH (ft.)	PID READING	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS	WELL CONSTRUCTION DETAILS
				0.0	0				Asphalt and gravel		
				-0.5					Dark brown CLAY, some silt		
				-3.0					Red-brown CLAY and SILT		
				-6.0	5				Dark grey medium- to fine-grain	Damp, petroleum odor	
				-8.0					SAND and SILT		
				-10					Grey LIMESTONE	Dry	
				-13.0					Grey LIMESTONE, trace dark grey		
				-19.0					Shale		
				20					Grey LIMESTONE, some dark grey		
				30					Shale		
				40	40					Fractures 27 - 28 feet	
				50						Fractures 30 - 31 feet	
										Fractures 35 - 36 feet	
										Boring terminated at 40 feet	

NOTES: 6"-diameter steel casing grouted in place to 20 feet; drilled out with 6"-diameter air hammer. 2"-diameter PVC screen and casing placed in borehole and grouted in place.



GEO-TECHNOLOGY
ASSOCIATES, INC.

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Laurel, MD 20707

LOG OF WELL NO. GTA-10

Sheet 1 of 1

LOG OF WELL NO. GTA-11

Sheet 1 of 1

PROJECT: **East Market Street**
 PROJECT NO.: **141834**
 PROJECT LOCATION: **2331 E. Market Street**

WATER LEVEL (ft): **2** DATE: **11/12/14**
 CAVED (ft): **—**

DATE STARTED: **11/12/14**
 DATE COMPLETED: **11/12/14**
 DRILLING CONTRACTOR: **Eichelbergers, Inc.**
 EQUIPMENT: **Schramm T555**
 DRILLER: **Tim Westover**
 DRILLING METHOD: **HSA**
 BORING DIA (in): **8.25**
 CASING TYPE: **PVC**
 SCREEN TYPE: **PVC**

WATER ENCOUNTERED DURING DRILLING (ft):
 GROUND SURFACE ELEVATION:

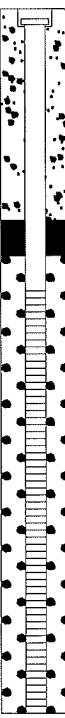
DATUM:

LOGGED BY: **J. Mutter**
 CHECKED BY: **B. Myers**

SAMPLING METHOD: **Grab**

CASING DIA (in.): **2**
 SCREEN SLOT SIZE(in): **0.020"**

CASING LEN. (ft): **12**
 SCREEN LEN. (ft): **8**

SAMPLE NUMBER	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft.)	ELEVATION (ft.)	DEPTH (ft.)	PID READING	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS	WELL CONSTRUCTION DETAILS
				0.0 -0.5	289				Asphalt and gravel Brown fine SAND and SILT, some Clay		

NOTES:



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LOG OF WELL NO. GTA-11

Sheet 1 of 1

LOG OF WELL NO. GTA-12

Sheet 1 of 1

PROJECT: **East Market Street**
 PROJECT NO.: **141834**
 PROJECT LOCATION: **2331 E. Market Street**

WATER LEVEL (ft): **▼ ▼ ▼**
 DATE: _____
 CAVED (ft): _____

DATE STARTED: **11/12/14**
 DATE COMPLETED: **11/12/14**
 DRILLING CONTRACTOR: **Eichelbergers, Inc.**
 EQUIPMENT: **Schramm T555**
 DRILLER: **Tim Westover**
 DRILLING METHOD: **HSA**
 BORING DIA (in): **8.25**
 CASING TYPE: **PVC**
 SCREEN TYPE: **PVC**
 SAMPLING METHOD: **Grab**
 Casing Dia (in.): **2**
 Screen Slot Size(in): **0.020"**
 Casing Len. (ft): **10**
 Screen Len. (ft): **10**

SAMPLE NUMBER	SAMPLE RECOVERY (ft.)	SAMPLE BLOWS/6 inches	N (blows/ft.)	ELEVATION (ft.)	DEPTH (ft.)	PID READING	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS	WELL CONSTRUCTION DETAILS
				0.0	0				Asphalt and gravel Dark brown fine SAND and CLAY		
				-0.5					Brown SILT and CLAY		
				-2.0							
				5							
				-6.0	3				Dark brown SILT and CLAY	Damp	
				-8.0							
				10					Grey LIMESTONE	Dry	
				-15.0	15						
				-16.0					Dark grey SHALE		
				-20.0	20				Grey LIMESTONE		
				25						Boring terminated at 20 feet	

NOTES:



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LOG OF WELL NO. GTA-12

Sheet 1 of 1

WATER WELL COMPLETION REPORT

Well Driller: **EICHELBERGERS INC.**Driller Well ID: **KR14100-GTA10**Driller License: **0198**

Local Permit #:

Type of Activity: **New Well**Original Well By: **Current Driller**Date Drilled: **11/14/2014**Drilling Method: **AIR ROTARY**Owner: **Elliott and Buchart**Address of Well: **2331 E. Market Street**Zipcode: **17402**County: **YORK**Municipality: **SPRINGETTSBURY**Municipality Type: **T**Coordinate Method: **Commercial Street Atlas Program**Quadrangle: **YORK**Latitude: **39.97477**Longitude: **-76.68174**Well Depth (*ft*): **40**Well Finish: **SCREEN**Depth to Bedrock (*ft*): **8**

Did Not Encounter Bedrock:

Well Yield (*gpm*):Yield Measure Method: **WATCH & BUCKET**Static Water Level:
(*ft below land surface*)Water level after yield test:
(*ft below land surface*)Length of Yield Test: **30**
(*minutes*)Saltwater Zone (*ft*):Use of Well: **OBSERVATION**Use of Water: **UNUSED**

DRILLER'S LOG

UNIT TOP	UNIT BOTTOM	DESCRIPTION OF UNITS PENETRATED
Unit Top 1: 0	Unit Bottom 1: 8	Unit 1: orange clays and silts
Unit Top 2: 8	Unit Bottom 2: 40	Unit 2: limestone

BOREHOLE

Section 1:	Top: 0	Bottom: 20	Diameter: 10
------------	---------------	-------------------	---------------------

CASING**Casing 1:**

Top: 0 Bottom: 25 Diameter: 2 Material: PVC OR OTHER PLASTIC

Seal(GROUT) 1:

Top: 0 Bottom: 23 Type: BENTONITE CHIPS/PELLETS

Casing 2:

Top: 0 Bottom: 20 Diameter: 6 Material: STEEL

Seal(GROUT) 2:

Top: 0 Bottom: 20 Type: BENTONITE SLURRY

SCREEN/SLOT

Screen 1:	Top: 25	Bottom: 40	Diameter: 2
	Type: SCREEN		
	Material: PLASTIC		Slot Size: 0.02
	Packing: Screened Sand		

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

EICHELBERGERS, INC.

107 TEXACO ROAD

MECHANICSBURG, PA 17050-2626

Driller's Signature (required)

Date

WATER WELL COMPLETION REPORT

Well Driller: **EICHELBERGERS INC.**Driller Well ID: **KR14100-GTA11**Driller License: **0198**

Local Permit #:

Type of Activity: **New Well**Original Well By: **Current Driller**Date Drilled: **11/14/2014**Drilling Method: **AIR ROTARY**Owner: **Elliott and Buchart**Address of Well: **2331 E. Market Street**Zipcode: **17402**County: **YORK**Municipality: **SPRINGETTSBURY**Municipality Type: **T**Coordinate Method: **Commercial Street Atlas Program**Quadrangle: **YORK**Latitude: **39.97480**Longitude: **-76.68177**Well Depth (*ft*): **20**Well Finish: **SCREEN**Depth to Bedrock (*ft*): **8.5**

Did Not Encounter Bedrock:

Well Yield (*gpm*):Yield Measure Method: **WATCH & BUCKET**Static Water Level:
(*ft below land surface*)Water level after yield test:
(*ft below land surface*)Length of Yield Test: **30**
(*minutes*)Saltwater Zone (*ft*):Use of Well: **OBSERVATION**Use of Water: **UNUSED**Description of Well Location and Other Notes:
Some water at 16 feet.

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
Unit Top 1: 0	Unit Bottom 1: 8.5	Unit 1: orange clays and silts
Unit Top 2: 8.5	Unit Bottom 2: 20	Unit 2: limestone

BOREHOLE

Section 1: Top: **0** Bottom: **20** Diameter: **6**

CASING

Casing 1:

Top: **0** Bottom: **10** Diameter: **2** Material: **PVC OR OTHER
PLASTIC**

Seal(GROUT) 1:

Top: **0** Bottom: **8** Type: **BENTONITE CHIPS/PELLETS**

SCREEN/SLOT

Screen 1: Top: **10** Bottom: **20** Diameter: **2**
Type: **SCREEN**
Material: **PLASTIC** Slot Size: **0.02**
Packing: **Screened Sand**

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

EICHELBERGERS, INC.

107 TEXACO ROAD

MECHANICSBURG, PA 17050-2626

Driller's Signature (required)

Date

WATER WELL COMPLETION REPORT

Well Driller: **EICHELBERGERS INC.**Driller Well ID: **KR14100-GTA12**Driller License: **0198**

Local Permit #:

Type of Activity: **New Well**Original Well By: **Current Driller**Date Drilled: **11/14/2014**Drilling Method: **AIR ROTARY**Owner: **Elliott and Buchart**Address of Well: **2331 E. Market Street**Zipcode: **17402**County: **YORK**Municipality: **SPRINGETTSBURY**Municipality Type: **T**Coordinate Method: **Commercial Street Atlas Program**Quadrangle: **YORK**Latitude: **39.97474**Longitude: **-76.68199**Well Depth (*ft*): **20**Well Finish: **SCREEN**Depth to Bedrock (*ft*): **7.5**

Did Not Encounter Bedrock:

Well Yield (*gpm*):Yield Measure Method: **WATCH & BUCKET**Static Water Level:
(*ft below land surface*)Water level after yield test:
(*ft below land surface*)Length of Yield Test: **30**
(*minutes*)Saltwater Zone (*ft*):Use of Well: **OBSERVATION**Use of Water: **UNUSED**Description of Well Location and Other Notes:
Some water at 11 feet.

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
-----------------	--------------------	--

Unit Top 1: **0** Unit Bottom 1: **7.5** Unit 1: **orange clays and silts**Unit Top 2: **7.5** Unit Bottom 2: **20** Unit 2: **limestone**

BOREHOLE

Section 1: Top: 0 Bottom: 20 Diameter: 6

CASING

Casing 1:

Top: 0 Bottom: 8 Diameter: 2 Material: PVC OR OTHER PLASTIC

Seal(Grout) 1:

Top: 0 Bottom: 6 Type: BENTONITE CHIPS/PELLETS

SCREEN/SLOT

Screen 1: Top: 8 Bottom: 20 Diameter: 2
Type: SCREEN
Material: PLASTIC Slot Size: 0.02
Packing: Screened Sand

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

EICHELBERGERS, INC.

107 TEXACO ROAD

MECHANICSBURG, PA 17050-2626

Driller's Signature (required)

Date

December 4, 2014 Sampling Event



ALS Environmental

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December 16, 2014

Mr. Ben Myers
Geo-Technology Associates, Inc.-Abingdon MD
3445-A Boxhill Corp. Ctr. Dr.
Abingdon, MD 21009

Certificate of Analysis

Revised Report - 12/16/2014 2:01:59 PM - See workorder comment section for explanation

Project Name:	2014-ROUTINE SUBMISSION-NICK	Workorder:	2043354
Purchase Order:		Workorder ID:	2331 Plaza

Dear Mr. Myers:

Enclosed are the analytical results for samples received by the laboratory on Thursday, December 4, 2014.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Debra J. Musser (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Nick Guns

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Debra J Musser

Ms. Debra J. Musser
Project Coordinator

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**ALS Environmental**34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.comNELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343**SAMPLE SUMMARY**

Workorder: 2043354 2331 Plaza

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2043354001	GTA-11	Ground Water	12/4/2014 10:00	12/4/2014 19:43	Mr. Nick Guns
2043354002	GTA-12	Ground Water	12/4/2014 10:57	12/4/2014 19:43	Mr. Nick Guns
2043354003	GTA-10	Ground Water	12/4/2014 11:52	12/4/2014 19:43	Mr. Nick Guns
2043354004	ARM-9	Ground Water	12/4/2014 12:48	12/4/2014 19:43	Mr. Nick Guns
2043354005	ARM-8	Ground Water	12/4/2014 13:56	12/4/2014 19:43	Mr. Nick Guns
2043354006	ARM-3	Ground Water	12/4/2014 14:51	12/4/2014 19:43	Mr. Nick Guns
2043354007	ARM-7	Ground Water	12/4/2014 15:52	12/4/2014 19:43	Mr. Nick Guns
2043354008	TB	Ground Water	12/4/2014 19:43	12/4/2014 19:43	Mr. Nick Guns

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SAMPLE SUMMARY

Workorder: 2043354 2331 Plaza

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit

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PROJECT SUMMARY

Workorder: 2043354 2331 Plaza

Workorder Comments

This report was revised to update the compound list reported. DJM

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354001	Date Collected:	12/4/2014 10:00	Matrix:	Ground Water
Sample ID:	GTA-11	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		12/9/14 14:27	TMP	A
Benzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Bromoform	ND	1	ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		12/9/14 14:27	TMP	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Chloroform	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		12/9/14 14:27	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
cis-1,2-Dichloroethene	187		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		12/9/14 14:27	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Freon 113	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		12/9/14 14:27	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		12/9/14 14:27	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354001	Date Collected:	12/4/2014 10:00	Matrix:	Ground Water
Sample ID:	GTA-11	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		12/9/14 14:27	TMP	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Styrene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Tetrachloroethene	494		ug/L	20.0	SW846 8260B		12/13/14 00:00	JPA	A
Toluene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/9/14 14:27	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/9/14 14:27	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Trichloroethene	80.2		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
Vinyl Chloride	2.5		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:27	TMP	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		12/9/14 14:27	TMP	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	96.5		%	62 - 133	SW846 8260B		12/13/14 00:00	JPA	A
1,2-Dichloroethane-d4 (S)	102		%	62 - 133	SW846 8260B		12/9/14 14:27	TMP	A
4-Bromofluorobenzene (S)	98.7		%	79 - 114	SW846 8260B		12/13/14 00:00	JPA	A
4-Bromofluorobenzene (S)	114		%	79 - 114	SW846 8260B		12/9/14 14:27	TMP	A
Dibromofluoromethane (S)	99.7		%	78 - 116	SW846 8260B		12/13/14 00:00	JPA	A
Dibromofluoromethane (S)	98.1		%	78 - 116	SW846 8260B		12/9/14 14:27	TMP	A
Toluene-d8 (S)	100		%	76 - 127	SW846 8260B		12/9/14 14:27	TMP	A
Toluene-d8 (S)	107		%	76 - 127	SW846 8260B		12/13/14 00:00	JPA	A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID: **2043354002** Date Collected: 12/4/2014 10:57 Matrix: Ground Water
Sample ID: **GTA-12** Date Received: 12/4/2014 19:43

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		12/9/14 14:49	TMP A
Benzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Bromoform	ND	1	ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Bromomethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
2-Butanone	ND		ug/L	10.0	SW846 8260B		12/9/14 14:49	TMP A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Chloroethane	1.0		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Chloroform	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Chloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		12/9/14 14:49	TMP A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
cis-1,2-Dichloroethene	181		ug/L	20.0	SW846 8260B		12/13/14 00:18	JPA A
trans-1,2-Dichloroethene	2.3		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		12/9/14 14:49	TMP A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Freon 113	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		12/9/14 14:49	TMP A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		12/9/14 14:49	TMP A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354002	Date Collected:	12/4/2014 10:57	Matrix:	Ground Water
Sample ID:	GTA-12	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		12/9/14 14:49	TMP A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Styrene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Tetrachloroethene	625		ug/L	20.0	SW846 8260B		12/13/14 00:18	JPA A
Toluene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/9/14 14:49	TMP A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/9/14 14:49	TMP A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Trichloroethene	131		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
Vinyl Chloride	1.1		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
o-Xylene	ND		ug/L	1.0	SW846 8260B		12/9/14 14:49	TMP A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		12/9/14 14:49	TMP A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	Cntr
1,2-Dichloroethane-d4 (S)	100		%	62 - 133	SW846 8260B		12/13/14 00:18	JPA A
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B		12/9/14 14:49	TMP A
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B		12/13/14 00:18	JPA A
4-Bromofluorobenzene (S)	108		%	79 - 114	SW846 8260B		12/9/14 14:49	TMP A
Dibromofluoromethane (S)	99.1		%	78 - 116	SW846 8260B		12/9/14 14:49	TMP A
Dibromofluoromethane (S)	103		%	78 - 116	SW846 8260B		12/13/14 00:18	JPA A
Toluene-d8 (S)	95.3		%	76 - 127	SW846 8260B		12/9/14 14:49	TMP A
Toluene-d8 (S)	110		%	76 - 127	SW846 8260B		12/13/14 00:18	JPA A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354003	Date Collected:	12/4/2014 11:52	Matrix:	Ground Water
Sample ID:	GTA-10	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		12/10/14 19:45	JPA	A
Benzene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Bromoform	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		12/10/14 19:45	JPA	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Chloroform	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		12/10/14 19:45	JPA	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,1-Dichloroethene	1.9		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
cis-1,2-Dichloroethene	161		ug/L	10.0	SW846 8260B		12/15/14 11:43	TMP	B
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		12/10/14 19:45	JPA	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Freon 113	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		12/10/14 19:45	JPA	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		12/10/14 19:45	JPA	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354003	Date Collected:	12/4/2014 11:52	Matrix:	Ground Water
Sample ID:	GTA-10	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	2.6		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		12/10/14 19:45	JPA	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Styrene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Tetrachloroethene	73.9		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Toluene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/10/14 19:45	JPA	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/10/14 19:45	JPA	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Trichloroethene	119		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
Vinyl Chloride	40.8		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		12/10/14 19:45	JPA	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		12/10/14 19:45	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	103		%	62 - 133	SW846 8260B		12/15/14 11:43	TMP	B
1,2-Dichloroethane-d4 (S)	84		%	62 - 133	SW846 8260B		12/10/14 19:45	JPA	A
4-Bromofluorobenzene (S)	92.5		%	79 - 114	SW846 8260B		12/10/14 19:45	JPA	A
4-Bromofluorobenzene (S)	96.1		%	79 - 114	SW846 8260B		12/15/14 11:43	TMP	B
Dibromofluoromethane (S)	86.2		%	78 - 116	SW846 8260B		12/10/14 19:45	JPA	A
Dibromofluoromethane (S)	103		%	78 - 116	SW846 8260B		12/15/14 11:43	TMP	B
Toluene-d8 (S)	108		%	76 - 127	SW846 8260B		12/15/14 11:43	TMP	B
Toluene-d8 (S)	94.9		%	76 - 127	SW846 8260B		12/10/14 19:45	JPA	A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354004	Date Collected:	12/4/2014 12:48	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		12/10/14 20:02	JPA A
Benzene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Bromoform	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Bromomethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
2-Butanone	ND		ug/L	10.0	SW846 8260B		12/10/14 20:02	JPA A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Chloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Chloroform	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Chloromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		12/10/14 20:02	JPA A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		12/10/14 20:02	JPA A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Freon 113	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		12/10/14 20:02	JPA A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		12/10/14 20:02	JPA A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354004	Date Collected:	12/4/2014 12:48	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		12/10/14 20:02	JPA A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Styrene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Tetrachloroethene	25.4		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Toluene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/10/14 20:02	JPA A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/10/14 20:02	JPA A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Trichloroethene	1.3		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
o-Xylene	ND		ug/L	1.0	SW846 8260B		12/10/14 20:02	JPA A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		12/10/14 20:02	JPA A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	Cntr
1,2-Dichloroethane-d4 (S)	80.6		%	62 - 133	SW846 8260B		12/10/14 20:02	JPA A
4-Bromofluorobenzene (S)	91.9		%	79 - 114	SW846 8260B		12/10/14 20:02	JPA A
Dibromofluoromethane (S)	81.8		%	78 - 116	SW846 8260B		12/10/14 20:02	JPA A
Toluene-d8 (S)	93.3		%	76 - 127	SW846 8260B		12/10/14 20:02	JPA A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354005	Date Collected:	12/4/2014 13:56	Matrix:	Ground Water
Sample ID:	ARM-8	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		12/9/14 23:28	CJG	A
Benzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Bromoform	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		12/9/14 23:28	CJG	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Chloroform	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		12/9/14 23:28	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
cis-1,2-Dichloroethene	2.2		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		12/9/14 23:28	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Freon 113	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		12/9/14 23:28	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		12/9/14 23:28	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID: **2043354005** Date Collected: 12/4/2014 13:56 Matrix: Ground Water
Sample ID: **ARM-8** Date Received: 12/4/2014 19:43

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		12/9/14 23:28	CJG	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Styrene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Tetrachloroethene	39.1		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/9/14 23:28	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/9/14 23:28	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Trichloroethene	3.0		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:28	CJG	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		12/9/14 23:28	CJG	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	85.4		%	62 - 133	SW846 8260B		12/9/14 23:28	CJG	A
4-Bromofluorobenzene (S)	96.9		%	79 - 114	SW846 8260B		12/9/14 23:28	CJG	A
Dibromofluoromethane (S)	86.5		%	78 - 116	SW846 8260B		12/9/14 23:28	CJG	A
Toluene-d8 (S)	99		%	76 - 127	SW846 8260B		12/9/14 23:28	CJG	A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354006	Date Collected:	12/4/2014 14:51	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		12/9/14 23:45	CJG A
Benzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Bromoform	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Bromomethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
2-Butanone	ND		ug/L	10.0	SW846 8260B		12/9/14 23:45	CJG A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Chloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Chloroform	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Chloromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		12/9/14 23:45	CJG A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,2-Dichlorobenzene	1.7		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,3-Dichlorobenzene	1.2		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,1-Dichloroethene	3.9		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
cis-1,2-Dichloroethene	3570		ug/L	100	SW846 8260B		12/13/14 00:35	JPA A
trans-1,2-Dichloroethene	31.0		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		12/9/14 23:45	CJG A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Freon 113	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		12/9/14 23:45	CJG A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		12/9/14 23:45	CJG A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354006	Date Collected:	12/4/2014 14:51	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		12/9/14 23:45	CJG A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Styrene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Tetrachloroethene	10400		ug/L	100	SW846 8260B		12/13/14 00:35	JPA A
Toluene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/9/14 23:45	CJG A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/9/14 23:45	CJG A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Trichloroethene	1030		ug/L	100	SW846 8260B		12/13/14 00:35	JPA A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
Vinyl Chloride	186		ug/L	100	SW846 8260B		12/13/14 00:35	JPA A
o-Xylene	ND		ug/L	1.0	SW846 8260B		12/9/14 23:45	CJG A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		12/9/14 23:45	CJG A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	Cntr
1,2-Dichloroethane-d4 (S)	81.8		%	62 - 133	SW846 8260B		12/9/14 23:45	CJG A
1,2-Dichloroethane-d4 (S)	99.2		%	62 - 133	SW846 8260B		12/13/14 00:35	JPA A
4-Bromofluorobenzene (S)	90.4		%	79 - 114	SW846 8260B		12/9/14 23:45	CJG A
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B		12/13/14 00:35	JPA A
Dibromofluoromethane (S)	86.4		%	78 - 116	SW846 8260B		12/9/14 23:45	CJG A
Dibromofluoromethane (S)	102		%	78 - 116	SW846 8260B		12/13/14 00:35	JPA A
Toluene-d8 (S)	91.2		%	76 - 127	SW846 8260B		12/9/14 23:45	CJG A
Toluene-d8 (S)	107		%	76 - 127	SW846 8260B		12/13/14 00:35	JPA A

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354007	Date Collected:	12/4/2014 15:52	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		12/10/14 00:02	CJG	A
Benzene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Bromoform	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		12/10/14 00:02	CJG	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Chloroform	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		12/10/14 00:02	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
cis-1,2-Dichloroethene	200		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
trans-1,2-Dichloroethene	2.2		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		12/10/14 00:02	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Freon 113	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		12/10/14 00:02	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		12/10/14 00:02	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354007	Date Collected:	12/4/2014 15:52	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		12/10/14 00:02	CJG	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Styrene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Tetrachloroethene	553		ug/L	10.0	SW846 8260B		12/13/14 00:52	JPA	A
Toluene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/10/14 00:02	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		12/10/14 00:02	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Trichloroethene	56.0		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		12/10/14 00:02	CJG	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		12/10/14 00:02	CJG	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	84.5		%	62 - 133	SW846 8260B		12/10/14 00:02	CJG	A
1,2-Dichloroethane-d4 (S)	99.6		%	62 - 133	SW846 8260B		12/13/14 00:52	JPA	A
4-Bromofluorobenzene (S)	89.2		%	79 - 114	SW846 8260B		12/10/14 00:02	CJG	A
4-Bromofluorobenzene (S)	96.7		%	79 - 114	SW846 8260B		12/13/14 00:52	JPA	A
Dibromofluoromethane (S)	85.5		%	78 - 116	SW846 8260B		12/10/14 00:02	CJG	A
Dibromofluoromethane (S)	101		%	78 - 116	SW846 8260B		12/13/14 00:52	JPA	A
Toluene-d8 (S)	105		%	76 - 127	SW846 8260B		12/13/14 00:52	JPA	A
Toluene-d8 (S)	92.9		%	76 - 127	SW846 8260B		12/10/14 00:02	CJG	A

Debra J Musser

Ms. Debra J. Musser
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2043354 2331 Plaza

Lab ID:	2043354008	Date Collected:	12/4/2014 19:43	Matrix:	Ground Water
Sample ID:	TB	Date Received:	12/4/2014 19:43		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Benzene	ND		ug/L	1.0	SW846 8260B		12/9/14 22:54	CJG A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		12/9/14 22:54	CJG A
Toluene	ND		ug/L	1.0	SW846 8260B		12/9/14 22:54	CJG A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		12/9/14 22:54	CJG A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	Cntr
1,2-Dichloroethane-d4 (S)	80		%	62 - 133	SW846 8260B		12/9/14 22:54	CJG A
4-Bromofluorobenzene (S)	93.9		%	79 - 114	SW846 8260B		12/9/14 22:54	CJG A
Dibromofluoromethane (S)	83.2		%	78 - 116	SW846 8260B		12/9/14 22:54	CJG A
Toluene-d8 (S)	96.5		%	76 - 127	SW846 8260B		12/9/14 22:54	CJG A

Debra J Musser

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Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2043354001	1	GTA-11	SW846 8260B	Bromoform
			The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Bromoform. The % Recovery was reported as 62.2 and the control limits were 70 to 123.	
2043354002	1	GTA-12	SW846 8260B	Bromoform
			The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Bromoform. The % Recovery was reported as 62.2 and the control limits were 70 to 123.	

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**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

Co. Name: CEO TECHNOCIS ASSOCIATES		Phone:		
Contact Report by: BEN MYERS				
Address: 3445 Box Hill Corporate Center Drive				
Arlington MD 22207				
Bill to (different than Report to): As ABOVE		PO#:		
Project Name#: 2331 Plaza		ALS Quote #:		
TAT:	<input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. <input type="checkbox"/> Rush Subject to ALS approval and surcharges.	Date Required:		
Email?	<input checked="" type="checkbox"/> benmyers@strong.com			
Fax?	<input checked="" type="checkbox"/> N/A			
Sample Description/Location (as it will appear on field report)		COC Comments	Sample Date	Military Time
1 GTA-11			2-4-4	1000 G 00
2 GTA-12	Extractive with preservative		2-4-4	1057 G 00
3 GTA-10			2-4-4	1152 G 00
4 APR-1-9			2-4-4	1248 G 00
5 APR-8			2-4-4	1330 G 00
6 APR-3			2-4-4	1451 G 00
7 APR-7			2-4-4	1552 G 00
8 TRB			2	Bulk
SAMPLER BY (Please Print):		Project Comments:		
NICK GUNS				
Relinquished By / Company Name		Date	Time	Received By / Company Name
Donald Lee Thomas/Marshall		2-4-4	1628	2-4-4 1628
5 Deanne Joseph AS		2-4-4	1743	4 1743
5 Deanne Joseph AS		2-4-4	1743	4 1743
5 Deanne Joseph AS		2-4-4	1743	4 1743
7		2	1743	4 1743
SAMPLED BY (Please Print):				
NICK GUNS				
Data Delivery Options		Date	Time	Comments
EDS		12/5/14	11/9	State Sample Collected In:
Report		12/5/14	11/9	MD
Faxes		12/5/14	11/9	NJ
Email		12/5/14	11/9	NY
CDs		12/5/14	11/9	PA
Other		12/5/14	11/9	Other
DOO Criteria Required? _____				
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Tuesday, December 16, 2014 2:02:04 PM

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ALS

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THE JOURNAL OF CLIMATE

19. *Chlorophytum comosum* (L.) Willd. (Asparagaceae) (Fig. 19)

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March 13, 2015 Sampling Event



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April 7, 2015

Mr. Ben Myers
Geo-Technology Associates, Inc.-Abingdon MD
3445-A Boxhill Corp. Ctr. Dr.
Abingdon, MD 21009

Certificate of Analysis

Revised Report - 4/7/2015 2:32:46 PM - See workorder comment section for explanation

Project Name:	GW MONITORING - HARRISBURG,	Workorder:	2059378
Purchase Order:	141834	Workorder ID:	141834

Dear Mr. Myers:

Enclosed are the analytical results for samples received by the laboratory on Friday, March 13, 2015.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Debra J. Musser (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Debra J Musser

Ms. Debra J. Musser
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2059378 141834

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2059378001	ARM-3	Ground Water	3/13/2015 14:35	3/13/2015 22:00	Mr. Nick Guns
2059378002	ARM-7	Ground Water	3/13/2015 15:15	3/13/2015 22:00	Mr. Nick Guns
2059378003	ARM-9	Ground Water	3/13/2015 13:50	3/13/2015 22:00	Mr. Nick Guns
2059378004	GTA-10	Ground Water	3/13/2015 10:00	3/13/2015 22:00	Mr. Nick Guns
2059378005	GTA-11	Ground Water	3/13/2015 10:50	3/13/2015 22:00	Mr. Nick Guns
2059378006	GTA-12	Ground Water	3/13/2015 11:55	3/13/2015 22:00	Mr. Nick Guns
2059378007	ARM-8	Ground Water	3/13/2015 12:45	3/13/2015 22:00	Mr. Nick Guns

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)

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PROJECT SUMMARY

Workorder: 2059378 141834

Workorder Comments

This report was revised to update the compound list reported. DJM

Sample Comments

Lab ID: 2059378001 **Sample ID:** ARM-3 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Lab ID: 2059378002 **Sample ID:** ARM-7 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Lab ID: 2059378003 **Sample ID:** ARM-9 **Sample Type:** SAMPLE

One or more of the method 8260 internal standards were recovered outside of the control limits.

Lab ID: 2059378004 **Sample ID:** GTA-10 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Lab ID: 2059378005 **Sample ID:** GTA-11 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Lab ID: 2059378006 **Sample ID:** GTA-12 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378001	Date Collected:	3/13/2015 14:35	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	1000	SW846 8260B		3/20/15 00:08	JPA A
Benzene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Bromochloromethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Bromodichloromethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Bromoform	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Bromomethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
2-Butanone	ND		ug/L	1000	SW846 8260B		3/20/15 00:08	JPA A
Carbon Disulfide	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Carbon Tetrachloride	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Chlorobenzene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Chlorodibromomethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Chloroethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Chloroform	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Chloromethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Cyclohexane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
1,2-Dibromo-3-chloropropane	ND		ug/L	700	SW846 8260B		3/20/15 00:08	JPA A
1,2-Dibromoethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
1,2-Dichlorobenzene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
1,3-Dichlorobenzene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
1,4-Dichlorobenzene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Dichlorodifluoromethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
1,1-Dichloroethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
1,2-Dichloroethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
1,1-Dichloroethene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
cis-1,2-Dichloroethylene	3060		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
trans-1,2-Dichloroethylene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
1,2-Dichloropropane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
cis-1,3-Dichloropropene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
trans-1,3-Dichloropropene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
1,4-Dioxane	ND		ug/L	32000	SW846 8260B		3/20/15 00:08	JPA A
Ethylbenzene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Freon 113	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
2-Hexanone	ND		ug/L	500	SW846 8260B		3/20/15 00:08	JPA A
Isopropylbenzene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A
Methyl acetate	ND		ug/L	200	SW846 8260B		3/20/15 00:08	JPA A
Methyl cyclohexane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378001	Date Collected:	3/13/2015 14:35	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	500	SW846 8260B		3/20/15 00:08	JPA	A
Methylene Chloride	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
Styrene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
Tetrachloroethene	9830		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
Toluene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
1,2,3-Trichlorobenzene	ND		ug/L	200	SW846 8260B		3/20/15 00:08	JPA	A
1,2,4-Trichlorobenzene	ND		ug/L	200	SW846 8260B		3/20/15 00:08	JPA	A
1,1,1-Trichloroethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
1,1,2-Trichloroethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
Trichloroethene	929		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
Trichlorofluoromethane	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
Vinyl Chloride	131		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
o-Xylene	ND		ug/L	100	SW846 8260B		3/20/15 00:08	JPA	A
mp-Xylene	ND		ug/L	200	SW846 8260B		3/20/15 00:08	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	96.1		%	62 - 133	SW846 8260B		3/20/15 00:08	JPA	A
4-Bromofluorobenzene (S)	108		%	79 - 114	SW846 8260B		3/20/15 00:08	JPA	A
Dibromofluoromethane (S)	88		%	78 - 116	SW846 8260B		3/20/15 00:08	JPA	A
Toluene-d8 (S)	104		%	76 - 127	SW846 8260B		3/20/15 00:08	JPA	A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378002	Date Collected:	3/13/2015 15:15	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	50.0	SW846 8260B		3/20/15 00:30	JPA	A
Benzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Bromoform	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Bromomethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
2-Butanone	ND		ug/L	50.0	SW846 8260B		3/20/15 00:30	JPA	A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Chloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Chloroform	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Chloromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Cyclohexane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		3/20/15 00:30	JPA	A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,2-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,3-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,4-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Dichlorodifluoromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
cis-1,2-Dichloroethene	175		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,4-Dioxane	ND		ug/L	1600	SW846 8260B		3/20/15 00:30	JPA	A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Freon 113	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		3/20/15 00:30	JPA	A
Isopropylbenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Methyl acetate	ND		ug/L	10.0	SW846 8260B		3/20/15 00:30	JPA	A
Methyl cyclohexane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378002	Date Collected:	3/13/2015 15:15	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		3/20/15 00:30	JPA	A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Styrene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Tetrachloroethene	594		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Toluene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,2,3-Trichlorobenzene	ND		ug/L	10.0	SW846 8260B		3/20/15 00:30	JPA	A
1,2,4-Trichlorobenzene	ND		ug/L	10.0	SW846 8260B		3/20/15 00:30	JPA	A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Trichloroethene	59.2		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Trichlorofluoromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
Vinyl Chloride	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
o-Xylene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:30	JPA	A
mp-Xylene	ND		ug/L	10.0	SW846 8260B		3/20/15 00:30	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	98.8		%	62 - 133	SW846 8260B		3/20/15 00:30	JPA	A
4-Bromofluorobenzene (S)	113		%	79 - 114	SW846 8260B		3/20/15 00:30	JPA	A
Dibromofluoromethane (S)	89.9		%	78 - 116	SW846 8260B		3/20/15 00:30	JPA	A
Toluene-d8 (S)	106		%	76 - 127	SW846 8260B		3/20/15 00:30	JPA	A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378003	Date Collected:	3/13/2015 13:50	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		3/18/15 22:07	JPA	A
Benzene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/18/15 22:07	JPA	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/18/15 22:07	JPA	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
cis-1,2-Dichloroethene	3.7		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
cis-1,3-Dichloropropene	ND	678	ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/18/15 22:07	JPA	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/18/15 22:07	JPA	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		3/18/15 22:07	JPA	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378003	Date Collected:	3/13/2015 13:50	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		3/18/15 22:07	JPA	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Styrene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Tetrachloroethene	10.1		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Toluene	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		3/18/15 22:07	JPA	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		3/18/15 22:07	JPA	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Trichloroethene	1.1		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
o-Xylene	ND	101 112	ug/L	1.0	SW846 8260B		3/18/15 22:07	JPA	A
mp-Xylene	ND	9	ug/L	2.0	SW846 8260B		3/18/15 22:07	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	105		%	62 - 133	SW846 8260B		3/18/15 22:07	JPA	A
4-Bromofluorobenzene (S)	88.1		%	79 - 114	SW846 8260B		3/18/15 22:07	JPA	A
Dibromofluoromethane (S)	92.2		%	78 - 116	SW846 8260B		3/18/15 22:07	JPA	A
Toluene-d8 (S)	92.3		%	76 - 127	SW846 8260B		3/18/15 22:07	JPA	A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378004	Date Collected:	3/13/2015 10:00	Matrix:	Ground Water
Sample ID:	GTA-10	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	50.0	SW846 8260B		3/20/15 00:52	JPA	A
Benzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Bromoform	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Bromomethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
2-Butanone	ND		ug/L	50.0	SW846 8260B		3/20/15 00:52	JPA	A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Chloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Chloroform	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Chloromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Cyclohexane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		3/20/15 00:52	JPA	A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,2-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,3-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,4-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Dichlorodifluoromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
cis-1,2-Dichloroethene	346		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,4-Dioxane	ND		ug/L	1600	SW846 8260B		3/20/15 00:52	JPA	A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Freon 113	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		3/20/15 00:52	JPA	A
Isopropylbenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Methyl acetate	ND		ug/L	10.0	SW846 8260B		3/20/15 00:52	JPA	A
Methyl cyclohexane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378004	Date Collected:	3/13/2015 10:00	Matrix:	Ground Water
Sample ID:	GTA-10	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		3/20/15 00:52	JPA	A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Styrene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Tetrachloroethene	12.4		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Toluene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,2,3-Trichlorobenzene	ND		ug/L	10.0	SW846 8260B		3/20/15 00:52	JPA	A
1,2,4-Trichlorobenzene	ND		ug/L	10.0	SW846 8260B		3/20/15 00:52	JPA	A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Trichloroethene	19.1		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Trichlorofluoromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
Vinyl Chloride	8.6		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
o-Xylene	ND		ug/L	5.0	SW846 8260B		3/20/15 00:52	JPA	A
mp-Xylene	ND		ug/L	10.0	SW846 8260B		3/20/15 00:52	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	96.9		%	62 - 133	SW846 8260B		3/20/15 00:52	JPA	A
4-Bromofluorobenzene (S)	109		%	79 - 114	SW846 8260B		3/20/15 00:52	JPA	A
Dibromofluoromethane (S)	90.4		%	78 - 116	SW846 8260B		3/20/15 00:52	JPA	A
Toluene-d8 (S)	108		%	76 - 127	SW846 8260B		3/20/15 00:52	JPA	A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378005	Date Collected:	3/13/2015 10:50	Matrix:	Ground Water
Sample ID:	GTA-11	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	200	SW846 8260B		3/19/15 23:46	JPA	A
Benzene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Bromochloromethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Bromodichloromethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Bromoform	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Bromomethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
2-Butanone	ND		ug/L	200	SW846 8260B		3/19/15 23:46	JPA	A
Carbon Disulfide	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Chlorobenzene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Chlorodibromomethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Chloroethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Chloroform	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Chloromethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Cyclohexane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	140	SW846 8260B		3/19/15 23:46	JPA	A
1,2-Dibromoethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,2-Dichlorobenzene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,3-Dichlorobenzene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,4-Dichlorobenzene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Dichlorodifluoromethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,1-Dichloroethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
cis-1,2-Dichloroethene	196		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,2-Dichloropropane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,4-Dioxane	ND		ug/L	6400	SW846 8260B		3/19/15 23:46	JPA	A
Ethylbenzene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Freon 113	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
2-Hexanone	ND		ug/L	100	SW846 8260B		3/19/15 23:46	JPA	A
Isopropylbenzene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Methyl acetate	ND		ug/L	40.0	SW846 8260B		3/19/15 23:46	JPA	A
Methyl cyclohexane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378005	Date Collected:	3/13/2015 10:50	Matrix:	Ground Water
Sample ID:	GTA-11	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	100	SW846 8260B		3/19/15 23:46	JPA	A
Methylene Chloride	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Styrene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Tetrachloroethene	1110		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Toluene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,2,3-Trichlorobenzene	ND		ug/L	40.0	SW846 8260B		3/19/15 23:46	JPA	A
1,2,4-Trichlorobenzene	ND		ug/L	40.0	SW846 8260B		3/19/15 23:46	JPA	A
1,1,1-Trichloroethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
1,1,2-Trichloroethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Trichloroethene	94.5		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Trichlorofluoromethane	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
o-Xylene	ND		ug/L	20.0	SW846 8260B		3/19/15 23:46	JPA	A
mp-Xylene	ND		ug/L	40.0	SW846 8260B		3/19/15 23:46	JPA	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	96.8		%	62 - 133	SW846 8260B		3/19/15 23:46	JPA	A
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B		3/19/15 23:46	JPA	A
Dibromofluoromethane (S)	90.3		%	78 - 116	SW846 8260B		3/19/15 23:46	JPA	A
Toluene-d8 (S)	105		%	76 - 127	SW846 8260B		3/19/15 23:46	JPA	A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378006	Date Collected:	3/13/2015 11:55	Matrix:	Ground Water
Sample ID:	GTA-12	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	50.0	SW846 8260B		3/20/15 01:14	JPA A
Benzene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Bromoform	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Bromomethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
2-Butanone	ND		ug/L	50.0	SW846 8260B		3/20/15 01:14	JPA A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Chloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Chloroform	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Chloromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Cyclohexane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		3/20/15 01:14	JPA A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
1,2-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
1,3-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
1,4-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Dichlorodifluoromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
cis-1,2-Dichloroethene	95.2		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
trans-1,2-Dichloroethene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
1,4-Dioxane	ND		ug/L	1600	SW846 8260B		3/20/15 01:14	JPA A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Freon 113	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		3/20/15 01:14	JPA A
Isopropylbenzene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A
Methyl acetate	ND		ug/L	10.0	SW846 8260B		3/20/15 01:14	JPA A
Methyl cyclohexane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378006	Date Collected:	3/13/2015 11:55	Matrix:	Ground Water
Sample ID:	GTA-12	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		3/20/15 01:14	JPA	A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
Styrene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
Tetrachloroethene	299		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
Toluene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
1,2,3-Trichlorobenzene	ND		ug/L	10.0	SW846 8260B		3/20/15 01:14	JPA	A
1,2,4-Trichlorobenzene	ND		ug/L	10.0	SW846 8260B		3/20/15 01:14	JPA	A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
Trichloroethene	58.8		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
Trichlorofluoromethane	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
Vinyl Chloride	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
o-Xylene	ND		ug/L	5.0	SW846 8260B		3/20/15 01:14	JPA	A
mp-Xylene	ND		ug/L	10.0	SW846 8260B		3/20/15 01:14	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	99.6		%	62 - 133	SW846 8260B		3/20/15 01:14	JPA	A
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B		3/20/15 01:14	JPA	A
Dibromofluoromethane (S)	90.3		%	78 - 116	SW846 8260B		3/20/15 01:14	JPA	A
Toluene-d8 (S)	107		%	76 - 127	SW846 8260B		3/20/15 01:14	JPA	A

Debra J Musser

Ms. Debra J. Musser
Project Coordinator

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378007	Date Collected:	3/13/2015 12:45	Matrix:	Ground Water
Sample ID:	ARM-8	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		3/19/15 22:41	JPA	A
Benzene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Bromoform	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		3/19/15 22:41	JPA	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Chloroform	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		3/19/15 22:41	JPA	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		3/19/15 22:41	JPA	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Freon 113	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		3/19/15 22:41	JPA	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		3/19/15 22:41	JPA	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A

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ANALYTICAL RESULTS

Workorder: 2059378 141834

Lab ID:	2059378007	Date Collected:	3/13/2015 12:45	Matrix:	Ground Water
Sample ID:	ARM-8	Date Received:	3/13/2015 22:00		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		3/19/15 22:41	JPA	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Styrene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Tetrachloroethene	21.8		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Toluene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		3/19/15 22:41	JPA	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		3/19/15 22:41	JPA	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Trichloroethene	1.2		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		3/19/15 22:41	JPA	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		3/19/15 22:41	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	98.7		%	62 - 133	SW846 8260B		3/19/15 22:41	JPA	A
4-Bromofluorobenzene (S)	110		%	79 - 114	SW846 8260B		3/19/15 22:41	JPA	A
Dibromofluoromethane (S)	89.9		%	78 - 116	SW846 8260B		3/19/15 22:41	JPA	A
Toluene-d8 (S)	107		%	76 - 127	SW846 8260B		3/19/15 22:41	JPA	A

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2059378003	6	ARM-9	SW846 8260B	cis-1,3-Dichloropropene
				The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 79.8 and the control limits were 81 to 121.
2059378003	7	ARM-9	SW846 8260B	cis-1,3-Dichloropropene
				The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 72.6 and the control limits were 81 to 121.
2059378003	8	ARM-9	SW846 8260B	cis-1,3-Dichloropropene
				The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 73 and the control limits were 81 to 121.
2059378003	9	ARM-9	SW846 8260B	mp-Xylene
				The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte mp-Xylene. The % Recovery was reported as 78.4 and the control limits were 79 to 125.
2059378003	10	ARM-9	SW846 8260B	o-Xylene
				The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte o-Xylene. The % Recovery was reported as 75.3 and the control limits were 79 to 124.
2059378003	11	ARM-9	SW846 8260B	o-Xylene
				The QC sample type MS for method SW846 8260B was outside the control limits for the analyte o-Xylene. The % Recovery was reported as 72.9 and the control limits were 79 to 124.
2059378003	12	ARM-9	SW846 8260B	o-Xylene
				The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte o-Xylene. The % Recovery was reported as 73.6 and the control limits were 79 to 124.

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May 22, 2015 Sampling Event



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June 4, 2015

Mr. Ben Myers
Geo-Technology Associates, Inc.-Abingdon MD
3445-A Boxhill Corp. Ctr. Dr.
Abingdon, MD 21009

Certificate of Analysis

Project Name:	GW MONITORING - HARRISBURG,	Workorder:	2072769
Purchase Order:		Workorder ID:	141834

Dear Mr. Myers:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 22, 2015.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Debra J. Musser (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Ms. Debra J. Musser
Project Coordinator

*This page is included as part of the Analytical Report and
must be retained as a permanent record thereof.*

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SAMPLE SUMMARY

Workorder: 2072769 141834

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2072769001	ARM-3	Ground Water	5/22/2015 12:10	5/22/2015 19:30	Mr. Nick Guns
2072769002	ARM-7	Ground Water	5/22/2015 15:25	5/22/2015 19:30	Mr. Nick Guns
2072769003	ARM-8	Ground Water	5/22/2015 13:30	5/22/2015 19:30	Mr. Nick Guns
2072769004	ARM-9	Ground Water	5/22/2015 12:55	5/22/2015 19:30	Mr. Nick Guns
2072769005	GTA-10	Ground Water	5/22/2015 11:20	5/22/2015 19:30	Mr. Nick Guns
2072769006	GTA-11	Ground Water	5/22/2015 14:10	5/22/2015 19:30	Mr. Nick Guns
2072769007	GTA-12	Ground Water	5/22/2015 14:50	5/22/2015 19:30	Mr. Nick Guns

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)

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PROJECT SUMMARY

Workorder: 2072769 141834

Sample Comments

Lab ID: 2072769001 **Sample ID:** ARM-3 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Lab ID: 2072769002 **Sample ID:** ARM-7 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Lab ID: 2072769005 **Sample ID:** GTA-10 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Lab ID: 2072769007 **Sample ID:** GTA-12 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769001	Date Collected:	5/22/2015 12:10	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	1000	SW846 8260B		6/2/15 03:51	JPA	A
Benzene	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Bromochloromethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Bromodichloromethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Bromoform	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Bromomethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
2-Butanone	ND		ug/L	1000	SW846 8260B		6/2/15 03:51	JPA	A
Carbon Disulfide	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Carbon Tetrachloride	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Chlorobenzene	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Chlorodibromomethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Chloroethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Chloroform	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Chloromethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	700	SW846 8260B		6/2/15 03:51	JPA	A
1,2-Dibromoethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
1,1-Dichloroethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
1,2-Dichloroethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
1,1-Dichloroethene	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
cis-1,2-Dichloroethene	2650		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
1,2-Dichloropropane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Ethylbenzene	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
2-Hexanone	ND		ug/L	500	SW846 8260B		6/2/15 03:51	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	500	SW846 8260B		6/2/15 03:51	JPA	A
Methylene Chloride	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Styrene	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Tetrachloroethene	7080		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Toluene	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Total Xylenes	ND		ug/L	300	SW846 8260B		6/2/15 03:51	JPA	A
1,1,1-Trichloroethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
1,1,2-Trichloroethane	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
Trichloroethene	853		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769001	Date Collected:	5/22/2015 12:10	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Vinyl Chloride	107		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
o-Xylene	ND		ug/L	100	SW846 8260B		6/2/15 03:51	JPA	A
m,p-Xylene	ND		ug/L	200	SW846 8260B		6/2/15 03:51	JPA	A
<i>Surrogate Recoveries</i>									
1,2-Dichloroethane-d4 (S)	98.1		%	62 - 133	SW846 8260B		6/2/15 03:51	JPA	A
4-Bromofluorobenzene (S)	91.9		%	79 - 114	SW846 8260B		6/2/15 03:51	JPA	A
Dibromofluoromethane (S)	89.4		%	78 - 116	SW846 8260B		6/2/15 03:51	JPA	A
Toluene-d8 (S)	89.3		%	76 - 127	SW846 8260B		6/2/15 03:51	JPA	A

Debra J Musser

Ms. Debra J. Musser

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769002	Date Collected:	5/22/2015 15:25	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	50.0	SW846 8260B		6/2/15 04:13	JPA	A
Benzene	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Bromoform	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Bromomethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
2-Butanone	ND		ug/L	50.0	SW846 8260B		6/2/15 04:13	JPA	A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Chloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Chloroform	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Chloromethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		6/2/15 04:13	JPA	A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
cis-1,2-Dichloroethene	350		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		6/2/15 04:13	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		6/2/15 04:13	JPA	A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Styrene	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Tetrachloroethene	926		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Toluene	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Total Xylenes	ND		ug/L	15.0	SW846 8260B		6/2/15 04:13	JPA	A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
Trichloroethene	75.3		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769002	Date Collected:	5/22/2015 15:25	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Vinyl Chloride	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
o-Xylene	ND		ug/L	5.0	SW846 8260B		6/2/15 04:13	JPA	A
mp-Xylene	ND		ug/L	10.0	SW846 8260B		6/2/15 04:13	JPA	A
<i>Surrogate Recoveries</i>									
1,2-Dichloroethane-d4 (S)	98.5		%	62 - 133	SW846 8260B		6/2/15 04:13	JPA	A
4-Bromofluorobenzene (S)	92.4		%	79 - 114	SW846 8260B		6/2/15 04:13	JPA	A
Dibromofluoromethane (S)	89.2		%	78 - 116	SW846 8260B		6/2/15 04:13	JPA	A
Toluene-d8 (S)	89		%	76 - 127	SW846 8260B		6/2/15 04:13	JPA	A

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769003	Date Collected:	5/22/2015 13:30	Matrix:	Ground Water
Sample ID:	ARM-8	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		6/2/15 04:35	JPA	A
Benzene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Bromoform	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		6/2/15 04:35	JPA	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Chloroform	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		6/2/15 04:35	JPA	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
cis-1,2-Dichloroethene	1.3		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		6/2/15 04:35	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		6/2/15 04:35	JPA	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Styrene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Tetrachloroethene	16.3		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Toluene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		6/2/15 04:35	JPA	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
Trichloroethene	1.8		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID: **2072769003** Date Collected: 5/22/2015 13:30 Matrix: Ground Water
Sample ID: **ARM-8** Date Received: 5/22/2015 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:35	JPA	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		6/2/15 04:35	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	99.6		%	62 - 133	SW846 8260B		6/2/15 04:35	JPA	A
4-Bromofluorobenzene (S)	92.4		%	79 - 114	SW846 8260B		6/2/15 04:35	JPA	A
Dibromofluoromethane (S)	88.8		%	78 - 116	SW846 8260B		6/2/15 04:35	JPA	A
Toluene-d8 (S)	90.8		%	76 - 127	SW846 8260B		6/2/15 04:35	JPA	A

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769004	Date Collected:	5/22/2015 12:55	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		6/2/15 04:56	JPA	A
Benzene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Bromoform	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		6/2/15 04:56	JPA	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Chloroform	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		6/2/15 04:56	JPA	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		6/2/15 04:56	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		6/2/15 04:56	JPA	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Styrene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Tetrachloroethene	13.3		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Toluene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		6/2/15 04:56	JPA	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID: **2072769004** Date Collected: 5/22/2015 12:55 Matrix: Ground Water
Sample ID: **ARM-9** Date Received: 5/22/2015 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		6/2/15 04:56	JPA	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		6/2/15 04:56	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	99.9		%	62 - 133	SW846 8260B		6/2/15 04:56	JPA	A
4-Bromofluorobenzene (S)	92.9		%	79 - 114	SW846 8260B		6/2/15 04:56	JPA	A
Dibromofluoromethane (S)	89		%	78 - 116	SW846 8260B		6/2/15 04:56	JPA	A
Toluene-d8 (S)	90.6		%	76 - 127	SW846 8260B		6/2/15 04:56	JPA	A

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769005	Date Collected:	5/22/2015 11:20	Matrix:	Ground Water
Sample ID:	GTA-10	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	50.0	SW846 8260B		6/2/15 05:18	JPA	A
Benzene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Bromoform	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Bromomethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
2-Butanone	ND		ug/L	50.0	SW846 8260B		6/2/15 05:18	JPA	A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Chloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Chloroform	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Chloromethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		6/2/15 05:18	JPA	A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
cis-1,2-Dichloroethene	414		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		6/2/15 05:18	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		6/2/15 05:18	JPA	A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Styrene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Tetrachloroethene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Toluene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Total Xylenes	ND		ug/L	15.0	SW846 8260B		6/2/15 05:18	JPA	A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
Trichloroethene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769005	Date Collected:	5/22/2015 11:20	Matrix:	Ground Water
Sample ID:	GTA-10	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Vinyl Chloride	10.5		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
o-Xylene	ND		ug/L	5.0	SW846 8260B		6/2/15 05:18	JPA	A
m,p-Xylene	ND		ug/L	10.0	SW846 8260B		6/2/15 05:18	JPA	A
<i>Surrogate Recoveries</i>									
1,2-Dichloroethane-d4 (S)	98.5		%	62 - 133	SW846 8260B		6/2/15 05:18	JPA	A
4-Bromofluorobenzene (S)	92.3		%	79 - 114	SW846 8260B		6/2/15 05:18	JPA	A
Dibromofluoromethane (S)	88.3		%	78 - 116	SW846 8260B		6/2/15 05:18	JPA	A
Toluene-d8 (S)	90.6		%	76 - 127	SW846 8260B		6/2/15 05:18	JPA	A

Debra J Musser
Ms. Debra J. Musser
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769006	Date Collected:	5/22/2015 14:10	Matrix:	Ground Water
Sample ID:	GTA-11	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	50.0	SW846 8260B		6/3/15 03:51	JPA	A
Benzene	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Bromoform	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Bromomethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
2-Butanone	ND		ug/L	50.0	SW846 8260B		6/3/15 03:51	JPA	A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Chloroethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Chloroform	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Chloromethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		6/3/15 03:51	JPA	A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
cis-1,2-Dichloroethene	669		ug/L	20.0	SW846 8260B		6/2/15 05:40	JPA	A
trans-1,2-Dichloroethene	ND	1	ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		6/3/15 03:51	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		6/3/15 03:51	JPA	A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Styrene	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Tetrachloroethene	53.9		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Toluene	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Total Xylenes	ND		ug/L	15.0	SW846 8260B		6/3/15 03:51	JPA	A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
Trichloroethene	23.3		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769006	Date Collected:	5/22/2015 14:10	Matrix:	Ground Water
Sample ID:	GTA-11	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Vinyl Chloride	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
o-Xylene	ND		ug/L	5.0	SW846 8260B		6/3/15 03:51	JPA	A
mp-Xylene	ND		ug/L	10.0	SW846 8260B		6/3/15 03:51	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	87.4		%	62 - 133	SW846 8260B		6/3/15 03:51	JPA	A
1,2-Dichloroethane-d4 (S)	102		%	62 - 133	SW846 8260B		6/2/15 05:40	JPA	A
4-Bromofluorobenzene (S)	93.2		%	79 - 114	SW846 8260B		6/2/15 05:40	JPA	A
4-Bromofluorobenzene (S)	97.7		%	79 - 114	SW846 8260B		6/3/15 03:51	JPA	A
Dibromofluoromethane (S)	90.1		%	78 - 116	SW846 8260B		6/2/15 05:40	JPA	A
Dibromofluoromethane (S)	86.5		%	78 - 116	SW846 8260B		6/3/15 03:51	JPA	A
Toluene-d8 (S)	92.2		%	76 - 127	SW846 8260B		6/2/15 05:40	JPA	A
Toluene-d8 (S)	97		%	76 - 127	SW846 8260B		6/3/15 03:51	JPA	A

Debra J Musser

Ms. Debra J. Musser
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID:	2072769007	Date Collected:	5/22/2015 14:50	Matrix:	Ground Water
Sample ID:	GTA-12	Date Received:	5/22/2015 19:30		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	50.0	SW846 8260B		6/2/15 06:02	JPA	A
Benzene	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Bromoform	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Bromomethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
2-Butanone	ND		ug/L	50.0	SW846 8260B		6/2/15 06:02	JPA	A
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Chloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Chloroform	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Chloromethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		6/2/15 06:02	JPA	A
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
cis-1,2-Dichloroethene	217		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
trans-1,2-Dichloroethene	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
2-Hexanone	ND		ug/L	25.0	SW846 8260B		6/2/15 06:02	JPA	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		6/2/15 06:02	JPA	A
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Styrene	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Tetrachloroethene	603		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Toluene	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Total Xylenes	ND		ug/L	15.0	SW846 8260B		6/2/15 06:02	JPA	A
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
Trichloroethene	138		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A

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ANALYTICAL RESULTS

Workorder: 2072769 141834

Lab ID: **2072769007** Date Collected: 5/22/2015 14:50 Matrix: Ground Water
Sample ID: **GTA-12** Date Received: 5/22/2015 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Vinyl Chloride	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
o-Xylene	ND		ug/L	5.0	SW846 8260B		6/2/15 06:02	JPA	A
mp-Xylene	ND		ug/L	10.0	SW846 8260B		6/2/15 06:02	JPA	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	99.9		%	62 - 133	SW846 8260B		6/2/15 06:02	JPA	A
4-Bromofluorobenzene (S)	94.3		%	79 - 114	SW846 8260B		6/2/15 06:02	JPA	A
Dibromofluoromethane (S)	89.6		%	78 - 116	SW846 8260B		6/2/15 06:02	JPA	A
Toluene-d8 (S)	90.5		%	76 - 127	SW846 8260B		6/2/15 06:02	JPA	A

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Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2072769006	1	GTA-11	SW846 8260B	trans-1,2-Dichloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 123 and the control limits were 71 to 122.

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APPENDIX E
Groundwater Sample Laboratory Analysis Report
December 30, 2015 Samples



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January 6, 2016

Mr. Paul Nachlas
Independence Environmental Consulting, LLC
1750 Kaylor Road
Hummelstown, PA 17036

Certificate of Analysis

Project Name: **0126.001.15**

Workorder: **2116136**

Purchase Order:

Workorder ID: **0126.001.15**

Dear Mr. Nachlas:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, December 30, 2015.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Susan J. Scherer
Ms. Susan J Scherer
Project Coordinator

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

SAMPLE SUMMARY

Workorder: 2116136 0126.001.15

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2116136001	ARM-9	Ground Water	12/30/2015 08:55	12/30/2015 15:32	Mr. Paul Nachlas
2116136002	ARM-8	Ground Water	12/30/2015 09:35	12/30/2015 15:32	Mr. Paul Nachlas
2116136003	ARM-7	Ground Water	12/30/2015 09:30	12/30/2015 15:32	Mr. Paul Nachlas
2116136004	GTA-11	Ground Water	12/30/2015 09:42	12/30/2015 15:32	Mr. Paul Nachlas
2116136005	GTA-10	Ground Water	12/30/2015 09:55	12/30/2015 15:32	Mr. Paul Nachlas
2116136006	GTA-12	Ground Water	12/30/2015 10:00	12/30/2015 15:32	Mr. Paul Nachlas
2116136007	ARM-3	Ground Water	12/30/2015 10:15	12/30/2015 15:32	Mr. Paul Nachlas
2116136008	ARM-3 DUP	Ground Water	12/30/2015 10:15	12/30/2015 15:32	Mr. Paul Nachlas

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SAMPLE SUMMARY

Workorder: 2116136 0126.001.15

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 2116136 0126.001.15

Sample Comments

Lab ID: 2116136005 **Sample ID:** GTA-10 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Lab ID: 2116136006 **Sample ID:** GTA-12 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136001	Date Collected:	12/30/2015 08:55	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		1/6/16 03:13	CJG	B
Benzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Bromoform	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Bromomethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
2-Butanone	ND		ug/L	10.0	SW846 8260B		1/6/16 03:13	CJG	B
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Chloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Chloroform	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Chloromethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Cyclohexane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		1/6/16 03:13	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,4-Dioxane	ND		ug/L	320	SW846 8260B		1/6/16 03:13	CJG	B
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Freon 113	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
2-Hexanone	ND		ug/L	5.0	SW846 8260B		1/6/16 03:13	CJG	B
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Methyl acetate	ND		ug/L	2.0	SW846 8260B		1/6/16 03:13	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136001	Date Collected:	12/30/2015 08:55	Matrix:	Ground Water
Sample ID:	ARM-9	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		1/6/16 03:13	CJG	B
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Styrene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Tetrachloroethene	16.0		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/6/16 03:13	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/6/16 03:13	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Trichloroethene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
o-Xylene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:13	CJG	B
mp-Xylene	ND		ug/L	2.0	SW846 8260B		1/6/16 03:13	CJG	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	99.3		%	62 - 133	SW846 8260B		1/6/16 03:13	CJG	B
4-Bromofluorobenzene (S)	85		%	79 - 114	SW846 8260B		1/6/16 03:13	CJG	B
Dibromofluoromethane (S)	94		%	78 - 116	SW846 8260B		1/6/16 03:13	CJG	B
Toluene-d8 (S)	95		%	76 - 127	SW846 8260B		1/6/16 03:13	CJG	B

Susan J. Scherer
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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136002	Date Collected:	12/30/2015 09:35	Matrix:	Ground Water
Sample ID:	ARM-8	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		1/6/16 03:30	CJG	B
Benzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Bromoform	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Bromomethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
2-Butanone	ND		ug/L	10.0	SW846 8260B		1/6/16 03:30	CJG	B
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Chloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Chloroform	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Chloromethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Cyclohexane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		1/6/16 03:30	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
cis-1,2-Dichloroethene	1.5		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,4-Dioxane	ND		ug/L	320	SW846 8260B		1/6/16 03:30	CJG	B
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Freon 113	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
2-Hexanone	ND		ug/L	5.0	SW846 8260B		1/6/16 03:30	CJG	B
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Methyl acetate	ND		ug/L	2.0	SW846 8260B		1/6/16 03:30	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136002	Date Collected:	12/30/2015 09:35	Matrix:	Ground Water
Sample ID:	ARM-8	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		1/6/16 03:30	CJG	B
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Styrene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Tetrachloroethene	31.4		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/6/16 03:30	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/6/16 03:30	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Trichloroethene	2.5		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
o-Xylene	ND		ug/L	1.0	SW846 8260B		1/6/16 03:30	CJG	B
mp-Xylene	ND		ug/L	2.0	SW846 8260B		1/6/16 03:30	CJG	B
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	103		%	62 - 133	SW846 8260B		1/6/16 03:30	CJG	B
4-Bromofluorobenzene (S)	88.7		%	79 - 114	SW846 8260B		1/6/16 03:30	CJG	B
Dibromofluoromethane (S)	95.7		%	78 - 116	SW846 8260B		1/6/16 03:30	CJG	B
Toluene-d8 (S)	94.8		%	76 - 127	SW846 8260B		1/6/16 03:30	CJG	B

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136003	Date Collected:	12/30/2015 09:30	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		1/5/16 03:10	CJG	A
Benzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Bromoform	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		1/5/16 03:10	CJG	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Chloroform	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Chloromethane	ND	1	ug/L	2.0	SW846 8260B		1/5/16 03:10	CJG	A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		1/5/16 03:10	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
cis-1,2-Dichloroethene	394		ug/L	25.0	SW846 8260B		1/6/16 04:04	CJG	B
trans-1,2-Dichloroethene	3.6		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		1/5/16 03:10	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Freon 113	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		1/5/16 03:10	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		1/5/16 03:10	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136003	Date Collected:	12/30/2015 09:30	Matrix:	Ground Water
Sample ID:	ARM-7	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		1/5/16 03:10	CJG	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Styrene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Tetrachloroethene	1220		ug/L	25.0	SW846 8260B		1/6/16 04:04	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/5/16 03:10	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/5/16 03:10	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Trichloroethene	141		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:10	CJG	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		1/5/16 03:10	CJG	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	87.9		%	62 - 133	SW846 8260B		1/5/16 03:10	CJG	A
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B		1/6/16 04:04	CJG	B
4-Bromofluorobenzene (S)	84.9		%	79 - 114	SW846 8260B		1/6/16 04:04	CJG	B
4-Bromofluorobenzene (S)	91.3		%	79 - 114	SW846 8260B		1/5/16 03:10	CJG	A
Dibromofluoromethane (S)	85.6		%	78 - 116	SW846 8260B		1/5/16 03:10	CJG	A
Dibromofluoromethane (S)	96.4		%	78 - 116	SW846 8260B		1/6/16 04:04	CJG	B
Toluene-d8 (S)	93.4		%	76 - 127	SW846 8260B		1/6/16 04:04	CJG	B
Toluene-d8 (S)	78.4		%	76 - 127	SW846 8260B		1/5/16 03:10	CJG	A

Susan J. Scherer
Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136004	Date Collected:	12/30/2015 09:42	Matrix:	Ground Water
Sample ID:	GTA-11	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		1/5/16 03:32	CJG	A
Benzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Bromoform	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		1/5/16 03:32	CJG	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Chloroform	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Chloromethane	ND	1	ug/L	2.0	SW846 8260B		1/5/16 03:32	CJG	A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		1/5/16 03:32	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
cis-1,2-Dichloroethene	635		ug/L	10.0	SW846 8260B		1/6/16 04:21	CJG	B
trans-1,2-Dichloroethene	4.0		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		1/5/16 03:32	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Freon 113	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		1/5/16 03:32	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		1/5/16 03:32	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136004	Date Collected:	12/30/2015 09:42	Matrix:	Ground Water
Sample ID:	GTA-11	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		1/5/16 03:32	CJG	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Styrene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Tetrachloroethene	295		ug/L	10.0	SW846 8260B		1/6/16 04:21	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/5/16 03:32	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/5/16 03:32	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Trichloroethene	25.8		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
Vinyl Chloride	20.5		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		1/5/16 03:32	CJG	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		1/5/16 03:32	CJG	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	88.2		%	62 - 133	SW846 8260B		1/5/16 03:32	CJG	A
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B		1/6/16 04:21	CJG	B
4-Bromofluorobenzene (S)	85.2		%	79 - 114	SW846 8260B		1/6/16 04:21	CJG	B
4-Bromofluorobenzene (S)	94.8		%	79 - 114	SW846 8260B		1/5/16 03:32	CJG	A
Dibromofluoromethane (S)	96.9		%	78 - 116	SW846 8260B		1/6/16 04:21	CJG	B
Dibromofluoromethane (S)	86.1		%	78 - 116	SW846 8260B		1/5/16 03:32	CJG	A
Toluene-d8 (S)	94.6		%	76 - 127	SW846 8260B		1/6/16 04:21	CJG	B
Toluene-d8 (S)	81.4		%	76 - 127	SW846 8260B		1/5/16 03:32	CJG	A

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136005	Date Collected:	12/30/2015 09:55	Matrix:	Ground Water
Sample ID:	GTA-10	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	50.0	SW846 8260B		1/6/16 04:38	CJG	B
Benzene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Bromoform	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Bromomethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
2-Butanone	ND		ug/L	50.0	SW846 8260B		1/6/16 04:38	CJG	B
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Chloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Chloroform	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Chloromethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Cyclohexane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		1/6/16 04:38	CJG	B
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
1,2-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
1,3-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
1,4-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Dichlorodifluoromethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
cis-1,2-Dichloroethene	320		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
trans-1,2-Dichloroethene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
1,4-Dioxane	ND		ug/L	1600	SW846 8260B		1/6/16 04:38	CJG	B
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Freon 113	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
2-Hexanone	ND		ug/L	25.0	SW846 8260B		1/6/16 04:38	CJG	B
Isopropylbenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B
Methyl acetate	ND		ug/L	10.0	SW846 8260B		1/6/16 04:38	CJG	B
Methyl cyclohexane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG	B

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136005	Date Collected:	12/30/2015 09:55	Matrix:	Ground Water
Sample ID:	GTA-10	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		1/6/16 04:38	CJG B
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
Styrene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
Tetrachloroethene	90.5		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
Toluene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
1,2,3-Trichlorobenzene	ND		ug/L	10.0	SW846 8260B		1/6/16 04:38	CJG B
1,2,4-Trichlorobenzene	ND		ug/L	10.0	SW846 8260B		1/6/16 04:38	CJG B
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
Trichloroethene	120		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
Trichlorofluoromethane	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
Vinyl Chloride	41.1		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
o-Xylene	ND		ug/L	5.0	SW846 8260B		1/6/16 04:38	CJG B
mp-Xylene	ND		ug/L	10.0	SW846 8260B		1/6/16 04:38	CJG B
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed By	Cntr
1,2-Dichloroethane-d4 (S)	99.5		%	62 - 133	SW846 8260B		1/6/16 04:38	CJG B
4-Bromofluorobenzene (S)	83.1		%	79 - 114	SW846 8260B		1/6/16 04:38	CJG B
Dibromofluoromethane (S)	94.5		%	78 - 116	SW846 8260B		1/6/16 04:38	CJG B
Toluene-d8 (S)	95.1		%	76 - 127	SW846 8260B		1/6/16 04:38	CJG B

Susan J. Scherer
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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136006	Date Collected:	12/30/2015 10:00	Matrix:	Ground Water
Sample ID:	GTA-12	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	50.0	SW846 8260B		1/6/16 05:46	CJG	B
Benzene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Bromochloromethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Bromodichloromethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Bromoform	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Bromomethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
2-Butanone	ND		ug/L	50.0	SW846 8260B		1/6/16 05:46	CJG	B
Carbon Disulfide	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Carbon Tetrachloride	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Chlorobenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Chlorodibromomethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Chloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Chloroform	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Chloromethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Cyclohexane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	35.0	SW846 8260B		1/6/16 05:46	CJG	B
1,2-Dibromoethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,2-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,3-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,4-Dichlorobenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Dichlorodifluoromethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,1-Dichloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,2-Dichloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,1-Dichloroethene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
cis-1,2-Dichloroethene	282		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
trans-1,2-Dichloroethene	9.9		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,2-Dichloropropane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,4-Dioxane	ND		ug/L	1600	SW846 8260B		1/6/16 05:46	CJG	B
Ethylbenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Freon 113	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
2-Hexanone	ND		ug/L	25.0	SW846 8260B		1/6/16 05:46	CJG	B
Isopropylbenzene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Methyl acetate	ND		ug/L	10.0	SW846 8260B		1/6/16 05:46	CJG	B
Methyl cyclohexane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136006	Date Collected:	12/30/2015 10:00	Matrix:	Ground Water
Sample ID:	GTA-12	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	25.0	SW846 8260B		1/6/16 05:46	CJG	B
Methylene Chloride	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Styrene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Tetrachloroethene	870		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Toluene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	10.0	SW846 8260B		1/6/16 05:46	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	10.0	SW846 8260B		1/6/16 05:46	CJG	B
1,1,1-Trichloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
1,1,2-Trichloroethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Trichloroethene	182		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Trichlorofluoromethane	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
Vinyl Chloride	11.1		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
o-Xylene	ND		ug/L	5.0	SW846 8260B		1/6/16 05:46	CJG	B
mp-Xylene	ND		ug/L	10.0	SW846 8260B		1/6/16 05:46	CJG	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B		1/6/16 05:46	CJG	B
4-Bromofluorobenzene (S)	89.2		%	79 - 114	SW846 8260B		1/6/16 05:46	CJG	B
Dibromofluoromethane (S)	94.4		%	78 - 116	SW846 8260B		1/6/16 05:46	CJG	B
Toluene-d8 (S)	96.8		%	76 - 127	SW846 8260B		1/6/16 05:46	CJG	B

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136007	Date Collected:	12/30/2015 10:15	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		1/5/16 04:38	CJG	A
Benzene	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Bromoform	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		1/5/16 04:38	CJG	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Chloroform	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Chloromethane	ND	1	ug/L	2.0	SW846 8260B		1/5/16 04:38	CJG	A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		1/5/16 04:38	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,2-Dichlorobenzene	1.8		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,3-Dichlorobenzene	1.3		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,1-Dichloroethene	4.3		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
cis-1,2-Dichloroethene	3170		ug/L	200	SW846 8260B		1/6/16 06:03	CJG	B
trans-1,2-Dichloroethene	30.7		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		1/5/16 04:38	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Freon 113	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		1/5/16 04:38	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		1/5/16 04:38	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136007	Date Collected:	12/30/2015 10:15	Matrix:	Ground Water
Sample ID:	ARM-3	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		1/5/16 04:38	CJG	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Styrene	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Tetrachloroethene	7980		ug/L	200	SW846 8260B		1/6/16 06:03	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/5/16 04:38	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/5/16 04:38	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Trichloroethene	1090		ug/L	200	SW846 8260B		1/6/16 06:03	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
Vinyl Chloride	154		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		1/5/16 04:38	CJG	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		1/5/16 04:38	CJG	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B		1/6/16 06:03	CJG	B
1,2-Dichloroethane-d4 (S)	86.7		%	62 - 133	SW846 8260B		1/5/16 04:38	CJG	A
4-Bromofluorobenzene (S)	98.4		%	79 - 114	SW846 8260B		1/5/16 04:38	CJG	A
4-Bromofluorobenzene (S)	90.4		%	79 - 114	SW846 8260B		1/6/16 06:03	CJG	B
Dibromofluoromethane (S)	85.8		%	78 - 116	SW846 8260B		1/5/16 04:38	CJG	A
Dibromofluoromethane (S)	96.2		%	78 - 116	SW846 8260B		1/6/16 06:03	CJG	B
Toluene-d8 (S)	81.7		%	76 - 127	SW846 8260B		1/5/16 04:38	CJG	A
Toluene-d8 (S)	96.4		%	76 - 127	SW846 8260B		1/6/16 06:03	CJG	B

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136008	Date Collected:	12/30/2015 10:15	Matrix:	Ground Water
Sample ID:	ARM-3 DUP	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS								
Acetone	ND		ug/L	10.0	SW846 8260B		1/5/16 05:00	CJG A
Benzene	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Bromoform	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Bromomethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
2-Butanone	ND		ug/L	10.0	SW846 8260B		1/5/16 05:00	CJG A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Chloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Chloroform	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Chloromethane	ND	1	ug/L	2.0	SW846 8260B		1/5/16 05:00	CJG A
Cyclohexane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		1/5/16 05:00	CJG A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
1,2-Dichlorobenzene	2.2		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
1,3-Dichlorobenzene	1.6		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
1,1-Dichloroethene	4.6		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
cis-1,2-Dichloroethene	3170		ug/L	200	SW846 8260B		1/6/16 06:20	CJG B
trans-1,2-Dichloroethene	28.3		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
1,4-Dioxane	ND		ug/L	320	SW846 8260B		1/5/16 05:00	CJG A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Freon 113	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		1/5/16 05:00	CJG A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A
Methyl acetate	ND		ug/L	2.0	SW846 8260B		1/5/16 05:00	CJG A
Methyl cyclohexane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG A

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ANALYTICAL RESULTS

Workorder: 2116136 0126.001.15

Lab ID:	2116136008	Date Collected:	12/30/2015 10:15	Matrix:	Ground Water
Sample ID:	ARM-3 DUP	Date Received:	12/30/2015 15:32		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		1/5/16 05:00	CJG	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG	A
Styrene	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG	A
Tetrachloroethene	9040		ug/L	200	SW846 8260B		1/6/16 06:20	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/5/16 05:00	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		1/5/16 05:00	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG	A
Trichloroethene	1100		ug/L	200	SW846 8260B		1/6/16 06:20	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG	A
Vinyl Chloride	161		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG	A
o-Xylene	ND		ug/L	1.0	SW846 8260B		1/5/16 05:00	CJG	A
mp-Xylene	ND		ug/L	2.0	SW846 8260B		1/5/16 05:00	CJG	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	102		%	62 - 133	SW846 8260B		1/6/16 06:20	CJG	B
1,2-Dichloroethane-d4 (S)	86.1		%	62 - 133	SW846 8260B		1/5/16 05:00	CJG	A
4-Bromofluorobenzene (S)	82.2		%	79 - 114	SW846 8260B		1/6/16 06:20	CJG	B
4-Bromofluorobenzene (S)	103		%	79 - 114	SW846 8260B		1/5/16 05:00	CJG	A
Dibromofluoromethane (S)	95.6		%	78 - 116	SW846 8260B		1/6/16 06:20	CJG	B
Dibromofluoromethane (S)	81.2		%	78 - 116	SW846 8260B		1/5/16 05:00	CJG	A
Toluene-d8 (S)	84.1		%	76 - 127	SW846 8260B		1/5/16 05:00	CJG	A
Toluene-d8 (S)	91.9		%	76 - 127	SW846 8260B		1/6/16 06:20	CJG	B

Susan J. Scherer
Ms. Susan J Scherer
Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2116136003	1	ARM-7	SW846 8260B	Chloromethane
			The reporting limit for this compound was raised to 2 ug/L due to contamination present from a previously analyzed sample.	
2116136004	1	GTA-11	SW846 8260B	Chloromethane
			The reporting limit for this compound was raised to 2 ug/L due to contamination present from a previously analyzed sample.	
2116136007	1	ARM-3	SW846 8260B	Chloromethane
			The reporting limit for this compound was raised to 2 ug/L due to contamination present from a previously analyzed sample.	
2116136008	1	ARM-3 DUP	SW846 8260B	Chloromethane
			The reporting limit for this compound was raised to 2 ug/L due to contamination present from a previously analyzed sample.	

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APPENDIX F
Soil Gas & Ambient Air Laboratory Analysis Reports

January 29, 2016 Sampling Event



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February 12, 2016

Mr. Paul Nachlas
Independence Environmental Consulting, LLC
1750 Kaylor Road
Hummelstown, PA 17036

Certificate of Analysis

Project Name: **2016-TO15 ANALYSIS**

Workorder: **2121289**

Purchase Order:

Workorder ID: **2016-TO15 ANALYSIS**

Dear Mr. Nachlas:

Enclosed are the analytical results for samples received by the laboratory on Friday, January 29, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

*This page is included as part of the Analytical Report and
must be retained as a permanent record thereof.*

Susan J. Scherer
Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2121289 2016-TO15 ANALYSIS

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2121289001	VP-1 Soil Gas	Air	1/29/2016 13:36	1/29/2016 15:55	Mr. Paul Nachlas
2121289002	VP-2 Soil Gas	Air	1/29/2016 13:40	1/29/2016 15:55	Mr. Paul Nachlas
2121289003	VP-3 Sub Slab	Air	1/29/2016 13:39	1/29/2016 15:55	Mr. Paul Nachlas
2121289004	VP-3 Ambient Air	Air	1/29/2016 13:34	1/29/2016 15:55	Mr. Paul Nachlas

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

Lab ID:	2121289001	Date Collected:	1/29/2016 13:36	Matrix:	Air
Sample ID:	VP-1 Soil Gas	Date Received:	1/29/2016 15:55		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS @ STP									
Acetone	13		ug/m3	0.5	TO-15		2/10/16 03:19	ECB	A
Benzene	10		ug/m3	0.6	TO-15		2/10/16 03:19	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Bromoform	ND		ug/m3	2	TO-15		2/10/16 03:19	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
1,3-Butadiene	ND		ug/m3	0.4	TO-15		2/10/16 03:19	ECB	A
2-Butanone	1.9		ug/m3	0.6	TO-15		2/10/16 03:19	ECB	A
Carbon Disulfide	6.6		ug/m3	0.6	TO-15		2/10/16 03:19	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		2/10/16 03:19	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		2/10/16 03:19	ECB	A
Chloroethane	ND		ug/m3	0.5	TO-15		2/10/16 03:19	ECB	A
Chloroform	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Chloromethane	ND	2	ug/m3	0.4	TO-15		2/10/16 03:19	ECB	A
3-Chloro-1-propene	ND		ug/m3	0.6	TO-15		2/10/16 03:19	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		2/10/16 03:19	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
1,3-Dichlorobenzene	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Dichlorodifluoromethane	1.5		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
cis-1,2-Dichloroethene	3.4		ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
trans-1,2-Dichloroethene	3.6		ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		2/10/16 03:19	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		2/10/16 03:19	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		2/10/16 03:19	ECB	A
Ethylbenzene	1.5		ug/m3	0.9	TO-15		2/10/16 03:19	ECB	A
4-Ethyltoluene	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Freon 113	ND		ug/m3	2	TO-15		2/10/16 03:19	ECB	A
Freon-114	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Heptane	21		ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
Hexane	23		ug/m3	0.7	TO-15		2/10/16 03:19	ECB	A
2-Hexanone	ND	78	ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
Isopropylbenzene	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		2/10/16 03:19	ECB	A

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ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

Lab ID: **2121289001** Date Collected: 1/29/2016 13:36 Matrix: Air
Sample ID: **VP-1 Soil Gas** Date Received: 1/29/2016 15:55

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
4-Methyl-2-Pentanone(MIBK)	ND		ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
Methylene Chloride	9.7		ug/m3	0.7	TO-15		2/10/16 03:19	ECB	A
Naphthalene	ND	192	ug/m3	1	TO-15		2/10/16 03:19	ECB	A
iso-Octane	9.4		ug/m3	0.9	TO-15		2/10/16 03:19	ECB	A
Styrene	ND	1112	ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Tetrachloroethene	22		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Toluene	30		ug/m3	0.8	TO-15		2/10/16 03:19	ECB	A
1,1,1-Trichloroethane	1.5		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Trichloroethene	28		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Trichlorofluoromethane	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
1,2,3-Trichloropropane	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
1,2,4-Trimethylbenzene	1.2	151	ug/m3	1	TO-15		2/10/16 03:19	ECB	A
1,3,5-Trimethylbenzene	ND		ug/m3	1	TO-15		2/10/16 03:19	ECB	A
Vinyl Chloride	ND	4	ug/m3	0.5	TO-15		2/10/16 03:19	ECB	A
o-Xylene	2.2		ug/m3	0.9	TO-15		2/10/16 03:19	ECB	A
mp-Xylene	5.8		ug/m3	2	TO-15		2/10/16 03:19	ECB	A

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ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

Lab ID:	2121289002	Date Collected:	1/29/2016 13:40	Matrix:	Air
Sample ID:	VP-2 Soil Gas	Date Received:	1/29/2016 15:55		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
VOLATILE ORGANICS @ STP								
Acetone	12		ug/m3	0.5	TO-15		2/10/16 04:05	ECB A
Benzene	1.9		ug/m3	0.6	TO-15		2/10/16 04:05	ECB A
Bromodichloromethane	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB A
Bromoform	ND		ug/m3	2	TO-15		2/10/16 04:05	ECB A
Bromomethane	ND		ug/m3	0.8	TO-15		2/10/16 04:05	ECB A
1,3-Butadiene	ND		ug/m3	0.4	TO-15		2/10/16 04:05	ECB A
2-Butanone	1.8		ug/m3	0.6	TO-15		2/10/16 04:05	ECB A
Carbon Disulfide	ND		ug/m3	0.6	TO-15		2/10/16 04:05	ECB A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB A
Chlorobenzene	ND		ug/m3	0.9	TO-15		2/10/16 04:05	ECB A
Chlorodibromomethane	ND		ug/m3	2	TO-15		2/10/16 04:05	ECB A
Chloroethane	ND		ug/m3	0.5	TO-15		2/10/16 04:05	ECB A
Chloroform	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB A
Chloromethane	ND		ug/m3	0.4	TO-15		2/10/16 04:05	ECB A
3-Chloro-1-propene	ND		ug/m3	0.6	TO-15		2/10/16 04:05	ECB A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		2/10/16 04:05	ECB A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB A
1,3-Dichlorobenzene	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB A
Dichlorodifluoromethane	1.6		ug/m3	1	TO-15		2/10/16 04:05	ECB A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		2/10/16 04:05	ECB A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		2/10/16 04:05	ECB A
1,1-Dichloroethylene	ND		ug/m3	0.8	TO-15		2/10/16 04:05	ECB A
cis-1,2-Dichloroethylene	4.2		ug/m3	0.8	TO-15		2/10/16 04:05	ECB A
trans-1,2-Dichloroethylene	ND		ug/m3	0.8	TO-15		2/10/16 04:05	ECB A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		2/10/16 04:05	ECB A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		2/10/16 04:05	ECB A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		2/10/16 04:05	ECB A
Ethylbenzene	2.6		ug/m3	0.9	TO-15		2/10/16 04:05	ECB A
4-Ethyltoluene	1.1		ug/m3	1	TO-15		2/10/16 04:05	ECB A
Freon 113	ND		ug/m3	2	TO-15		2/10/16 04:05	ECB A
Freon-114	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB A
Heptane	2.3		ug/m3	0.8	TO-15		2/10/16 04:05	ECB A
Hexane	3.0		ug/m3	0.7	TO-15		2/10/16 04:05	ECB A
2-Hexanone	ND	56	ug/m3	0.8	TO-15		2/10/16 04:05	ECB A
Isopropylbenzene	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		2/10/16 04:05	ECB A

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ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

Lab ID:	2121289002	Date Collected:	1/29/2016 13:40	Matrix:	Air
Sample ID:	VP-2 Soil Gas	Date Received:	1/29/2016 15:55		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
4-Methyl-2-Pentanone(MIBK)	ND		ug/m3	0.8	TO-15		2/10/16 04:05	ECB	A
Methylene Chloride	1.9		ug/m3	0.7	TO-15		2/10/16 04:05	ECB	A
Naphthalene	ND	171	ug/m3	1	TO-15		2/10/16 04:05	ECB	A
		8							
Iso-Octane	1.4		ug/m3	0.9	TO-15		2/10/16 04:05	ECB	A
Styrene	ND	910	ug/m3	0.8	TO-15		2/10/16 04:05	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB	A
Tetrachloroethene	16		ug/m3	1	TO-15		2/10/16 04:05	ECB	A
Toluene	16		ug/m3	0.8	TO-15		2/10/16 04:05	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB	A
Trichloroethene	5.9		ug/m3	1	TO-15		2/10/16 04:05	ECB	A
Trichlorofluoromethane	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB	A
1,2,3-Trichloropropane	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB	A
1,2,4-Trimethylbenzene	4.4	131	ug/m3	1	TO-15		2/10/16 04:05	ECB	A
		4							
1,3,5-Trimethylbenzene	ND		ug/m3	1	TO-15		2/10/16 04:05	ECB	A
Vinyl Chloride	ND	2	ug/m3	0.5	TO-15		2/10/16 04:05	ECB	A
o-Xylene	4.2		ug/m3	0.9	TO-15		2/10/16 04:05	ECB	A
mp-Xylene	13		ug/m3	2	TO-15		2/10/16 04:05	ECB	A

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ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

Lab ID:	2121289003	Date Collected:	1/29/2016 13:39	Matrix:	Air
Sample ID:	VP-3 Sub Slab	Date Received:	1/29/2016 15:55		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS @ STP									
Acetone	14		ug/m3	0.5	TO-15		2/10/16 04:51	ECB	A
Benzene	7.8		ug/m3	0.6	TO-15		2/10/16 04:51	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Bromoform	ND		ug/m3	2	TO-15		2/10/16 04:51	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		2/10/16 04:51	ECB	A
1,3-Butadiene	ND		ug/m3	0.4	TO-15		2/10/16 04:51	ECB	A
2-Butanone	1.9		ug/m3	0.6	TO-15		2/10/16 04:51	ECB	A
Carbon Disulfide	ND		ug/m3	0.6	TO-15		2/10/16 04:51	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		2/10/16 04:51	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		2/10/16 04:51	ECB	A
Chloroethane	ND		ug/m3	0.5	TO-15		2/10/16 04:51	ECB	A
Chloroform	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Chloromethane	ND	19	ug/m3	0.4	TO-15		2/10/16 04:51	ECB	A
3-Chloro-1-propene	ND		ug/m3	0.6	TO-15		2/10/16 04:51	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		2/10/16 04:51	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
1,3-Dichlorobenzene	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Dichlorodifluoromethane	1.5		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		2/10/16 04:51	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		2/10/16 04:51	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		2/10/16 04:51	ECB	A
cis-1,2-Dichloroethene	510		ug/m3	8	TO-15		2/9/16 09:35	ECB	A
trans-1,2-Dichloroethene	2.7		ug/m3	0.8	TO-15		2/10/16 04:51	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		2/10/16 04:51	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		2/10/16 04:51	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		2/10/16 04:51	ECB	A
Ethylbenzene	11		ug/m3	0.9	TO-15		2/10/16 04:51	ECB	A
4-Ethyltoluene	2.1		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Freon 113	ND		ug/m3	2	TO-15		2/10/16 04:51	ECB	A
Freon-114	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Heptane	17		ug/m3	0.8	TO-15		2/10/16 04:51	ECB	A
Hexane	5.4		ug/m3	0.7	TO-15		2/10/16 04:51	ECB	A
2-Hexanone	ND	34	ug/m3	0.8	TO-15		2/10/16 04:51	ECB	A
Isopropylbenzene	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		2/10/16 04:51	ECB	A

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ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

Lab ID:	2121289003	Date Collected:	1/29/2016 13:39	Matrix:	Air
Sample ID:	VP-3 Sub Slab	Date Received:	1/29/2016 15:55		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
4-Methyl-2-Pentanone(MIBK)	ND		ug/m3	0.8	TO-15		2/10/16 04:51	ECB	A
Methylene Chloride	3.4		ug/m3	0.7	TO-15		2/10/16 04:51	ECB	A
Naphthalene	ND	151	ug/m3	1	TO-15		2/10/16 04:51	ECB	A
		6							
iso-Octane	4.5		ug/m3	0.9	TO-15		2/10/16 04:51	ECB	A
Styrene	ND	78	ug/m3	0.8	TO-15		2/10/16 04:51	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Tetrachloroethene	510		ug/m3	14	TO-15		2/9/16 09:35	ECB	A
Toluene	94		ug/m3	0.8	TO-15		2/10/16 04:51	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Trichloroethene	110		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Trichlorofluoromethane	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
1,2,3-Trichloropropane	ND		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
1,2,4-Trimethylbenzene	8.4	1112	ug/m3	1	TO-15		2/10/16 04:51	ECB	A
1,3,5-Trimethylbenzene	2.4		ug/m3	1	TO-15		2/10/16 04:51	ECB	A
Vinyl Chloride	ND	21	ug/m3	0.5	TO-15		2/10/16 04:51	ECB	A
o-Xylene	15		ug/m3	0.9	TO-15		2/10/16 04:51	ECB	A
mp-Xylene	47		ug/m3	2	TO-15		2/10/16 04:51	ECB	A

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ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

Lab ID:	2121289004	Date Collected:	1/29/2016 13:34	Matrix:	Air
Sample ID:	VP-3 Ambient Air	Date Received:	1/29/2016 15:55		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS @ STP									
Acetone	6.6		ug/m3	0.5	TO-15		2/9/16 07:24	ECB	A
Benzene	0.64		ug/m3	0.6	TO-15		2/9/16 07:24	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Bromoform	ND		ug/m3	2	TO-15		2/9/16 07:24	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
1,3-Butadiene	ND		ug/m3	0.4	TO-15		2/9/16 07:24	ECB	A
2-Butanone	ND		ug/m3	0.6	TO-15		2/9/16 07:24	ECB	A
Carbon Disulfide	ND		ug/m3	0.6	TO-15		2/9/16 07:24	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		2/9/16 07:24	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		2/9/16 07:24	ECB	A
Chloroethane	ND		ug/m3	0.5	TO-15		2/9/16 07:24	ECB	A
Chloroform	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Chloromethane	0.81		ug/m3	0.4	TO-15		2/9/16 07:24	ECB	A
3-Chloro-1-propene	ND		ug/m3	0.6	TO-15		2/9/16 07:24	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		2/9/16 07:24	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
1,3-Dichlorobenzene	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Dichlorodifluoromethane	1.6		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
cis-1,2-Dichloroethene	2.8		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		2/9/16 07:24	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		2/9/16 07:24	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		2/9/16 07:24	ECB	A
Ethylbenzene	ND		ug/m3	0.9	TO-15		2/9/16 07:24	ECB	A
4-Ethyltoluene	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Freon 113	ND		ug/m3	2	TO-15		2/9/16 07:24	ECB	A
Freon-114	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Heptane	ND		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
Hexane	0.83		ug/m3	0.7	TO-15		2/9/16 07:24	ECB	A
2-Hexanone	ND		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
Isopropylbenzene	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		2/9/16 07:24	ECB	A

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ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

Lab ID:	2121289004	Date Collected:	1/29/2016 13:34	Matrix:	Air
Sample ID:	VP-3 Ambient Air	Date Received:	1/29/2016 15:55		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
4-Methyl-2-Pentanone(MIBK)	ND		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
Methylene Chloride	1.8		ug/m3	0.7	TO-15		2/9/16 07:24	ECB	A
Naphthalene	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Iso-Octane	ND		ug/m3	0.9	TO-15		2/9/16 07:24	ECB	A
Styrene	ND		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Tetrachloroethene	120		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Toluene	0.83		ug/m3	0.8	TO-15		2/9/16 07:24	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Trichloroethene	4.1		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Trichlorofluoromethane	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
1,2,3-Trichloropropane	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
1,2,4-Trimethylbenzene	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
1,3,5-Trimethylbenzene	ND		ug/m3	1	TO-15		2/9/16 07:24	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15		2/9/16 07:24	ECB	A
o-Xylene	ND		ug/m3	0.9	TO-15		2/9/16 07:24	ECB	A
mp-Xylene	ND		ug/m3	2	TO-15		2/9/16 07:24	ECB	A

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2121289001	1	VP-1 Soil Gas	TO-15	Chloromethane
				The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Chloromethane. The % Recovery was reported as 145 and the control limits were 60 to 140.
2121289001	2	VP-1 Soil Gas	TO-15	Chloromethane
				The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Chloromethane. The % Recovery was reported as 145 and the control limits were 60 to 140.
2121289001	3	VP-1 Soil Gas	TO-15	Vinyl Chloride
				The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Vinyl Chloride. The % Recovery was reported as 143 and the control limits were 60 to 140.
2121289001	4	VP-1 Soil Gas	TO-15	Vinyl Chloride
				The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Vinyl Chloride. The % Recovery was reported as 143 and the control limits were 60 to 140.
2121289001	5	VP-1 Soil Gas	TO-15	2-Hexanone
				The QC sample type LCS for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 58 and the control limits were 60 to 140.
2121289001	6	VP-1 Soil Gas	TO-15	2-Hexanone
				The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 56 and the control limits were 60 to 140.
2121289001	7	VP-1 Soil Gas	TO-15	2-Hexanone
				The QC sample type LCS for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 58 and the control limits were 60 to 140.
2121289001	8	VP-1 Soil Gas	TO-15	2-Hexanone
				The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 56 and the control limits were 60 to 140.
2121289001	9	VP-1 Soil Gas	TO-15	Styrene
				The QC sample type LCS for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 58 and the control limits were 60 to 140.
2121289001	10	VP-1 Soil Gas	TO-15	Styrene
				The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 55 and the control limits were 60 to 140.
2121289001	11	VP-1 Soil Gas	TO-15	Styrene
				The QC sample type LCS for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 58 and the control limits were 60 to 140.
2121289001	12	VP-1 Soil Gas	TO-15	Styrene
				The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 55 and the control limits were 60 to 140.
2121289001	13	VP-1 Soil Gas	TO-15	1,2,4-Trimethylbenzene
				The QC sample type LCS for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 56 and the control limits were 60 to 140.
2121289001	14	VP-1 Soil Gas	TO-15	1,2,4-Trimethylbenzene
				The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 54 and the control limits were 60 to 140.
2121289001	15	VP-1 Soil Gas	TO-15	1,2,4-Trimethylbenzene
				The QC sample type LCS for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 56 and the control limits were 60 to 140.
2121289001	16	VP-1 Soil Gas	TO-15	1,2,4-Trimethylbenzene
				The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 54 and the control limits were 60 to 140.

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

2121289001 17 VP-1 Soil Gas TO-15 Naphthalene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 59 and the control limits were 60 to 140.

2121289001 18 VP-1 Soil Gas TO-15 Naphthalene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289001 19 VP-1 Soil Gas TO-15 Naphthalene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 59 and the control limits were 60 to 140.

2121289001 20 VP-1 Soil Gas TO-15 Naphthalene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289001 21 VP-1 Soil Gas TO-15 p-Isopropyltoluene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte p-Isopropyltoluene. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289002 1 VP-2 Soil Gas TO-15 Vinyl Chloride

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Vinyl Chloride. The % Recovery was reported as 143 and the control limits were 60 to 140.

2121289002 2 VP-2 Soil Gas TO-15 Vinyl Chloride

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Vinyl Chloride. The % Recovery was reported as 143 and the control limits were 60 to 140.

2121289002 3 VP-2 Soil Gas TO-15 2-Hexanone

The QC sample type LCS for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289002 4 VP-2 Soil Gas TO-15 2-Hexanone

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289002 5 VP-2 Soil Gas TO-15 2-Hexanone

The QC sample type LCS for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289002 6 VP-2 Soil Gas TO-15 2-Hexanone

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289002 7 VP-2 Soil Gas TO-15 Styrene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289002 8 VP-2 Soil Gas TO-15 Styrene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 55 and the control limits were 60 to 140.

2121289002 9 VP-2 Soil Gas TO-15 Styrene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289002 10 VP-2 Soil Gas TO-15 Styrene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 55 and the control limits were 60 to 140.

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ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

2121289002 11 VP-2 Soil Gas TO-15 1,2,4-Trimethylbenzene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289002 12 VP-2 Soil Gas TO-15 1,2,4-Trimethylbenzene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 54 and the control limits were 60 to 140.

2121289002 13 VP-2 Soil Gas TO-15 1,2,4-Trimethylbenzene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289002 14 VP-2 Soil Gas TO-15 1,2,4-Trimethylbenzene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 54 and the control limits were 60 to 140.

2121289002 15 VP-2 Soil Gas TO-15 Naphthalene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 59 and the control limits were 60 to 140.

2121289002 16 VP-2 Soil Gas TO-15 Naphthalene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289002 17 VP-2 Soil Gas TO-15 Naphthalene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 59 and the control limits were 60 to 140.

2121289002 18 VP-2 Soil Gas TO-15 Naphthalene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289002 19 VP-2 Soil Gas TO-15 p-Isopropyltoluene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte p-Isopropyltoluene. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289003 1 VP-3 Sub Slab TO-15 2-Hexanone

The QC sample type LCS for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289003 2 VP-3 Sub Slab TO-15 2-Hexanone

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289003 3 VP-3 Sub Slab TO-15 2-Hexanone

The QC sample type LCS for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289003 4 VP-3 Sub Slab TO-15 2-Hexanone

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289003 5 VP-3 Sub Slab TO-15 Styrene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289003 6 VP-3 Sub Slab TO-15 Styrene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 55 and the control limits were 60 to 140.

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ANALYTICAL RESULTS

Workorder: 2121289 2016-TO15 ANALYSIS

2121289003 7 VP-3 Sub Slab TO-15

Styrene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289003 8 VP-3 Sub Slab TO-15

Styrene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Styrene. The % Recovery was reported as 55 and the control limits were 60 to 140.

2121289003 9 VP-3 Sub Slab TO-15

1,2,4-Trimethylbenzene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289003 10 VP-3 Sub Slab TO-15

1,2,4-Trimethylbenzene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 54 and the control limits were 60 to 140.

2121289003 11 VP-3 Sub Slab TO-15

1,2,4-Trimethylbenzene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289003 12 VP-3 Sub Slab TO-15

1,2,4-Trimethylbenzene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte 1,2,4-Trimethylbenzene. The % Recovery was reported as 54 and the control limits were 60 to 140.

2121289003 13 VP-3 Sub Slab TO-15

Naphthalene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 59 and the control limits were 60 to 140.

2121289003 14 VP-3 Sub Slab TO-15

Naphthalene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289003 15 VP-3 Sub Slab TO-15

Naphthalene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 59 and the control limits were 60 to 140.

2121289003 16 VP-3 Sub Slab TO-15

Naphthalene

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 56 and the control limits were 60 to 140.

2121289003 17 VP-3 Sub Slab TO-15

p-Isopropyltoluene

The QC sample type LCS for method TO-15 was outside the control limits for the analyte p-Isopropyltoluene. The % Recovery was reported as 58 and the control limits were 60 to 140.

2121289003 18 VP-3 Sub Slab TO-15

Chloromethane

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Chloromethane. The % Recovery was reported as 145 and the control limits were 60 to 140.

2121289003 19 VP-3 Sub Slab TO-15

Chloromethane

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Chloromethane. The % Recovery was reported as 145 and the control limits were 60 to 140.

2121289003 20 VP-3 Sub Slab TO-15

Vinyl Chloride

The QC sample type LCSD for method TO-15 was outside the control limits for the analyte Vinyl Chloride. The % Recovery was reported as 143 and the control limits were 60 to 140.

2121289003 21 VP-3 Sub Slab TO-15

Vinyl Chloride

The QC sample type LCS for method TO-15 was outside the control limits for the analyte Vinyl Chloride. The % Recovery was reported as 143 and the control limits were 60 to 140.

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F: 717-944-1430

AIR ANALYSIS

CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADDED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER.

INSTRUCTIONS ON THE BACK.

1. CLIENT INFORMATION

2. ANALYSES/METHOD REQUESTED									
No.	TO-15	STO-15	UST-15	OTHER	LABORATORY CANISTER CERTIFIED BY:				
COMS Analyst Signature: <i>John S. Ziegler</i>									
CANISTERS PREPARED BY:									
Name:	EYDIA OBOYD								
Phone:	717-503-4200								
Project Name/#:	As above								
BILL TO:	As above								
TAT:	Normal Standard TAT is 10-12 business days. Non-TAT is subject to ALS approval and surcharges.								
Date Requested:									
Email#:	jziegler@alsenvironmental.com								
Fax#:	1-717-944-1430								

3. LABORATORY RECEIVING INFORMATION:															
COC Complete/Accurate? <input checked="" type="checkbox"/>															
Labels Complete/Accurate? <input checked="" type="checkbox"/>															
Canister Seals Present? <input checked="" type="checkbox"/>															
Canister Seals Intact? <input checked="" type="checkbox"/>															
Returned in ≤ 15 days? <input checked="" type="checkbox"/>															
Custody Seal #S: #Z-232															
Custody Seal #S: #Z-232															
Counter/Tracking #: <i>1234567890</i>															
4. FIELD DATA SHEET															
TO-15 FIELD DATA															
Sample Type	Choose one: To-be-analyzed or reference/test sample	Sample Date	Start Time	Stop Time	Temp Deg F	P	Controller No.	Canister No.	Flow	LABORATORY RECORD					
										Canister Pressure (PSI)	Certification	Canister Stop	Canister Start	Flow Controller	Canister Pressure (PSI)
1 VP-1 Gas	AS	1/29/16	12:00	13:36	30	/	1245	7340780	26.5	2/01/2015	-13.5	-1	-1	83.2	
2 VP-2 Soil Gas	AS	1/29/16	13:40	13:40	30	/	11423	7310476	>30	3.5	2/01/2015	-3.5	-0	1	83.2
3 VP-3 Soil	SS	1/29/16	13:38	13:38	62	/	1075	7342109	>30	5.5	2/01/2015	-19.0	-2.3	0	83.0
4 VP-3 Water	TA	1/29/16	13:34	13:34	63	/	11989	7324B19	27.5	1	2/01/2015	-38.0	-1.6	1	83.1
5															
6															
7															
8															
9															
10															
5. SAMPLED BY (Please Print): <i>John S. Ziegler</i>															
LOGGED BY (Signature): <i>John S. Ziegler</i>															
REVIEWED BY (Signature): <i>John S. Ziegler</i>															
6. PROJECT INFORMATION															
Published By / Company Name	Date	Time	Received By / Company Name		Date	Time	Time	Time	Time	State Samples Collected In					
1 <i>John S. Ziegler</i> / TEC	1/29/16	15:55	<i>John S. Ziegler</i>		1/29/16	15:55	1/29/16	15:55	1/29/16	15:55	NY	<input type="checkbox"/>			
2											NJ	<input type="checkbox"/>			
3											PA	<input checked="" type="checkbox"/>			
4											NC	<input type="checkbox"/>			
5											Other	<input type="checkbox"/>			
6															
7															
8															
9															
10															

ALS-Middletown

TO-15 Sample Receipt Checklist

Client ID: Independence Env
 Horizon WO#: 21212859
 Sample Delivery Group ID: NIA
 Log In By/Date: Susan Schaefer 02/01/16
 (signature) Susan Schaefer
 Number of Shipping containers received: 1

Project Name/#: Not provided
 Date/Time received: 1/29/16 1555
 Received By: Adam Trounce
 Project Manager Review (date) 02/01/16
 (signature) Susan Schaefer
 Courier: Client

Circle the response below as appropriate.

1. Did kit(s) come with a shipping slip (airbill, etc.)? YES NO NA
 If YES, enter airbill numbers:

Shipping Container Information:

2. Were shipping containers received without signs of tampering? YES NO NA
 Comments: _____

 3. Were custody seals present and intact? YES NO NA
 4. Were custody seals numbers present? YES NO NA
 List Custody Seal Numbers:
2030

Sample Condition:

5. Were sample containers received intact without signs of tampering? YES NO NA
 Comments: _____

Chain of Custody:

6. Did COC arrive with the samples? YES NO NA
 7. Do sample ID/Sample Description(s) match samples submitted? YES NO NA
 8. Is date and time of collection listed on the COC for all samples? YES NO NA
 9. Is identification of sampler on COC? YES NO NA
 10. Are requested test method(s) on COC? YES NO NA
 11. Are necessary signatures on COC? YES NO NA
 12. Was Internal COC initiated? (should always be YES) YES NO NA

Sample Integrity Usability:

13. Do sample containers match the COC? YES NO NA
 14. Were sample canisters received within 15 days of shipment to client? YES NO NA

Anomalies or Non-Conformances:

March 4, 2016 Sampling Event



Lancaster Laboratories
Environmental

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Independence Env. Consulting
1750 Kaylor Road
Hummelstown PA 17036

Report Date: March 16, 2016

Project: Plaza 2331

Submittal Date: 03/04/2016
Group Number: 1637380
State of Sample Origin: PA

Client Sample Description
VP-3 Ambient Indoor Air
VP-3 Sub-slab Air
VP-1 Air
VP-2 Air

Lancaster Labs (LL) #
8271082
8271083
8271084
8271085

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To Independence Env. Consulting

Attn: Paul Nachlas

Respectfully Submitted,

Stacy L. Butt
Specialist

(717) 556-7236



Lancaster Laboratories
Environmental

Analysis Report

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Sample Description: VP-3 Ambient Indoor Air
SUMMA CAN# 1034
Plazo 2331

LL Sample # AQ 8271082
LL Group # 1637380
Account # 20826

Project Name: Plazo 2331

Collected: 03/04/2016 08:37 by PN
through 03/04/2016 09:37
Submitted: 03/04/2016 11:55
Reported: 03/16/2016 16:29

Independence Env. Consulting
1750 Kaylor Road
Hummelstown PA 17036

CAT No.	Analysis Name	CAS Number	Final Result ug/m3	MDL ug/m3	Final Result ppb (v)	MDL ppb (v)	DF
	Volatiles in Air	EPA TO-15					
05298	Acetone	67-64-1	29	1.2	12	0.50	1
05298	Benzene	71-43-2	1.0	0.64	0.32	0.20	1
05298	Bromobenzene	108-86-1	N.D.	1.3	N.D.	0.20	1
05298	Bromodichloromethane	75-27-4	N.D.	1.3	N.D.	0.20	1
05298	Bromoform	75-25-2	N.D.	2.1	N.D.	0.20	1
05298	Bromomethane	74-83-9	N.D.	0.78	N.D.	0.20	1
05298	1,3-Butadiene	106-99-0	N.D.	0.88	N.D.	0.40	1
05298	2-Butanone	78-93-3	2.9	1.5	0.99	0.50	1
05298	Carbon Disulfide	75-15-0	N.D.	1.6	N.D.	0.50	1
05298	Carbon Tetrachloride	56-23-5	N.D.	1.3	N.D.	0.20	1
05298	Chlorobenzene	108-90-7	N.D.	0.92	N.D.	0.20	1
05298	Chlorodifluoromethane	75-45-6	6.8	0.71	1.9	0.20	1
05298	Chloroethane	75-00-3	N.D.	0.53	N.D.	0.20	1
05298	Chloroform	67-66-3	N.D.	0.98	N.D.	0.20	1
05298	Chloromethane	74-87-3	N.D.	0.41	N.D.	0.20	1
05298	3-Chloropropene	107-05-1	N.D.	0.63	N.D.	0.20	1
05298	Cumene	98-82-8	N.D.	0.98	N.D.	0.20	1
05298	Dibromochloromethane	124-48-1	N.D.	1.7	N.D.	0.20	1
05298	1,2-Dibromoethane	106-93-4	N.D.	1.5	N.D.	0.20	1
05298	Dibromomethane	74-95-3	N.D.	1.4	N.D.	0.20	1
05298	1,2-Dichlorobenzene	95-50-1	N.D.	1.2	N.D.	0.20	1
05298	1,3-Dichlorobenzene	541-73-1	N.D.	1.2	N.D.	0.20	1
05298	1,4-Dichlorobenzene	106-46-7	1.2	1.2	0.21	0.20	1
05298	Dichlorodifluoromethane	75-71-8	4.0	0.99	0.81	0.20	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.81	N.D.	0.20	1
05298	1,2-Dichloroethane	107-06-2	N.D.	0.81	N.D.	0.20	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.79	N.D.	0.20	1
05298	cis-1,2-Dichloroethene	156-59-2	57	0.79	14	0.20	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.79	N.D.	0.20	1
05298	Dichlorofluoromethane	75-43-4	N.D.	0.84	N.D.	0.20	1
05298	1,2-Dichloropropane	78-87-5	N.D.	0.92	N.D.	0.20	1
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.91	N.D.	0.20	1
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.91	N.D.	0.20	1
05298	Ethylbenzene	100-41-4	3.1	0.87	0.72	0.20	1
05298	4-Ethyltoluene	622-96-8	N.D.	0.98	N.D.	0.20	1
05298	Freon 113	76-13-1	N.D.	3.8	N.D.	0.50	1
05298	Freon 114	76-14-2	N.D.	1.4	N.D.	0.20	1
05298	Heptane	142-82-5	N.D.	0.82	N.D.	0.20	1
05298	Hexachloroethane	67-72-1	N.D.	1.9	N.D.	0.20	1
05298	Hexane	110-54-3	0.77	0.70	0.22	0.20	1
05298	2-Hexanone	591-78-6	N.D.	2.0	N.D.	0.50	1
05298	Isooctane	540-84-1	N.D.	0.93	N.D.	0.20	1
05298	Methyl t-Butyl Ether	1634-04-4	N.D.	0.72	N.D.	0.20	1
05298	4-Methyl-2-pentanone	108-10-1	N.D.	2.0	N.D.	0.50	1
05298	Methylene Chloride	75-09-2	1.2	0.69	0.34	0.20	1
05298	Naphthalene	91-20-3	N.D.	2.6	N.D.	0.50	1
05298	Octane	111-65-9	1.3	0.93	0.27	0.20	1
05298	Pentane	109-66-0	1.9	0.59	0.63	0.20	1
05298	Styrene	100-42-5	N.D.	0.85	N.D.	0.20	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1.4	N.D.	0.20	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.4	N.D.	0.20	1



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Analysis Report

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Sample Description: VP-3 Ambient Indoor Air
SUMMA CAN# 1034
Plazo 2331

LL Sample # AQ 8271082
LL Group # 1637380
Account # 20826

Project Name: Plazo 2331

Collected: 03/04/2016 08:37 by PN
through 03/04/2016 09:37
Submitted: 03/04/2016 11:55
Reported: 03/16/2016 16:29

Independence Env. Consulting
1750 Kaylor Road
Hummelstown PA 17036

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15							
05298	Tetrachloroethene	127-18-4	260	1.4	39	0.20	1
05298	Toluene	108-88-3	1.7	0.75	0.46	0.20	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	1.1	N.D.	0.20	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	1.1	N.D.	0.20	1
05298	Trichloroethene	79-01-6	23	1.1	4.3	0.20	1
05298	Trichlorofluoromethane	75-69-4	2.4	1.1	0.43	0.20	1
05298	1,2,3-Trichloropropane	96-18-4	N.D.	1.2	N.D.	0.20	1
05298	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.98	N.D.	0.20	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.98	N.D.	0.20	1
05298	Vinyl Chloride	75-01-4	N.D.	0.51	N.D.	0.20	1
05298	m/p-Xylene	179601-23-1	7.1	0.87	1.6	0.20	1
05298	o-Xylene	95-47-6	5.1	0.87	1.2	0.20	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MDL = Method Detection Limit

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1607130AA	03/11/2016 23:28	Jacob E Bailey	1



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Analysis Report

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Sample Description: VP-3 Sub-slab Air
SUMMA CAN# 837
Plazo 2331

LL Sample # AQ 8271083
LL Group # 1637380
Account # 20826

Project Name: Plazo 2331

Collected: 03/04/2016 08:39 by PN
through 03/04/2016 09:39
Submitted: 03/04/2016 11:55
Reported: 03/16/2016 16:29

Independence Env. Consulting
1750 Kaylor Road
Hummelstown PA 17036

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
	Volatiles in Air	EPA TO-15	ug/m3	ug/m3	ppb (v)	ppb (v)	
05298	Acetone	67-64-1	15	12	6.3	5.0	10
05298	Benzene	71-43-2	N.D.	6.4	N.D.	2.0	10
05298	Bromobenzene	108-86-1	N.D.	13	N.D.	2.0	10
05298	Bromodichloromethane	75-27-4	N.D.	13	N.D.	2.0	10
05298	Bromoform	75-25-2	N.D.	21	N.D.	2.0	10
05298	Bromomethane	74-83-9	N.D.	7.8	N.D.	2.0	10
05298	1,3-Butadiene	106-99-0	N.D.	8.8	N.D.	4.0	10
05298	2-Butanone	78-93-3	N.D.	15	N.D.	5.0	10
05298	Carbon Disulfide	75-15-0	N.D.	16	N.D.	5.0	10
05298	Carbon Tetrachloride	56-23-5	N.D.	13	N.D.	2.0	10
05298	Chlorobenzene	108-90-7	N.D.	9.2	N.D.	2.0	10
05298	Chlorodifluoromethane	75-45-6	N.D.	7.1	N.D.	2.0	10
05298	Chloroethane	75-00-3	N.D.	5.3	N.D.	2.0	10
05298	Chloroform	67-66-3	N.D.	9.8	N.D.	2.0	10
05298	Chloromethane	74-87-3	N.D.	4.1	N.D.	2.0	10
05298	3-Chloropropene	107-05-1	N.D.	6.3	N.D.	2.0	10
05298	Cumene	98-82-8	N.D.	9.8	N.D.	2.0	10
05298	Dibromochloromethane	124-48-1	N.D.	17	N.D.	2.0	10
05298	1,2-Dibromoethane	106-93-4	N.D.	15	N.D.	2.0	10
05298	Dibromomethane	74-95-3	N.D.	14	N.D.	2.0	10
05298	1,2-Dichlorobenzene	95-50-1	N.D.	12	N.D.	2.0	10
05298	1,3-Dichlorobenzene	541-73-1	N.D.	12	N.D.	2.0	10
05298	1,4-Dichlorobenzene	106-46-7	N.D.	12	N.D.	2.0	10
05298	Dichlorodifluoromethane	75-71-8	N.D.	9.9	N.D.	2.0	10
05298	1,1-Dichloroethane	75-34-3	N.D.	8.1	N.D.	2.0	10
05298	1,2-Dichloroethane	107-06-2	N.D.	8.1	N.D.	2.0	10
05298	1,1-Dichloroethene	75-35-4	32	7.9	8.2	2.0	10
05298	cis-1,2-Dichloroethene	156-59-2	32,000	790	8,100	200	1000
05298	trans-1,2-Dichloroethene	156-60-5	240	7.9	60	2.0	10
05298	Dichlorofluoromethane	75-43-4	N.D.	8.4	N.D.	2.0	10
05298	1,2-Dichloropropane	78-87-5	N.D.	9.2	N.D.	2.0	10
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	9.1	N.D.	2.0	10
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	9.1	N.D.	2.0	10
05298	Ethylbenzene	100-41-4	N.D.	8.7	N.D.	2.0	10
05298	4-Ethyltoluene	622-96-8	N.D.	9.8	N.D.	2.0	10
05298	Freon 113	76-13-1	N.D.	38	N.D.	5.0	10
05298	Freon 114	76-14-2	N.D.	14	N.D.	2.0	10
05298	Heptane	142-82-5	N.D.	8.2	N.D.	2.0	10
05298	Hexachloroethane	67-72-1	N.D.	19	N.D.	2.0	10
05298	Hexane	110-54-3	N.D.	7.0	N.D.	2.0	10
05298	2-Hexanone	591-78-6	N.D.	20	N.D.	5.0	10
05298	Isooctane	540-84-1	N.D.	9.3	N.D.	2.0	10
05298	Methyl t-Butyl Ether	1634-04-4	N.D.	7.2	N.D.	2.0	10
05298	4-Methyl-2-pentanone	108-10-1	N.D.	20	N.D.	5.0	10
05298	Methylene Chloride	75-09-2	N.D.	6.9	N.D.	2.0	10
05298	Naphthalene	91-20-3	N.D.	26	N.D.	5.0	10
05298	Octane	111-65-9	N.D.	9.3	N.D.	2.0	10
05298	Pentane	109-66-0	N.D.	5.9	N.D.	2.0	10
05298	Styrene	100-42-5	N.D.	8.5	N.D.	2.0	10
05298	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	14	N.D.	2.0	10
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	14	N.D.	2.0	10



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Analysis Report

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Sample Description: VP-3 Sub-slab Air
SUMMA CAN# 837
Plazo 2331

LL Sample # AQ 8271083
LL Group # 1637380
Account # 20826

Project Name: Plazo 2331

Collected: 03/04/2016 08:39 by PN
through 03/04/2016 09:39
Submitted: 03/04/2016 11:55
Reported: 03/16/2016 16:29

Independence Env. Consulting
1750 Kaylor Road
Hummelstown PA 17036

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
	Volatiles in Air	EPA TO-15	ug/m3	ug/m3	ppb(v)	ppb(v)	
05298	Tetrachloroethene	127-18-4	110,000	1,400	16,000	200	1000
05298	Toluene	108-88-3	N.D.	7.5	N.D.	2.0	10
05298	1,1,1-Trichloroethane	71-55-6	N.D.	11	N.D.	2.0	10
05298	1,1,2-Trichloroethane	79-00-5	N.D.	11	N.D.	2.0	10
05298	Trichloroethene	79-01-6	7,300	1,100	1,400	200	1000
05298	Trichlorofluoromethane	75-69-4	N.D.	11	N.D.	2.0	10
05298	1,2,3-Trichloropropane	96-18-4	N.D.	12	N.D.	2.0	10
05298	1,2,4-Trimethylbenzene	95-63-6	N.D.	9.8	N.D.	2.0	10
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	9.8	N.D.	2.0	10
05298	Vinyl Chloride	75-01-4	44	5.1	17	2.0	10
05298	m/p-Xylene	179601-23-1	N.D.	8.7	N.D.	2.0	10
05298	o-Xylene	95-47-6	N.D.	8.7	N.D.	2.0	10

MDL = Method Detection Limit

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1607130AA	03/11/2016 23:53	Jacob E Bailey	10
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1607330AA	03/14/2016 14:48	Jacob E Bailey	1000



Sample Description: VP-1 Air
SUMMA CAN# 1172
Plazo 2331

LL Sample # AQ 8271084
LL Group # 1637380
Account # 20826

Project Name: Plazo 2331

Collected: 03/04/2016 08:35 by PN
through 03/04/2016 09:45
Submitted: 03/04/2016 11:55
Reported: 03/16/2016 16:29

Independence Env. Consulting
1750 Kaylor Road
Hummelstown PA 17036

CAT No.	Analysis Name	CAS Number	Final Result ug/m3	MDL ug/m3	Final Result ppb (v)	MDL ppb (v)	DF
Volatiles in Air	EPA TO-15						
05298	Acetone	67-64-1	25	1.2	11	0.50	1
05298	Benzene	71-43-2	1.1	0.64	0.35	0.20	1
05298	Bromobenzene	108-86-1	N.D.	1.3	N.D.	0.20	1
05298	Bromodichloromethane	75-27-4	N.D.	1.3	N.D.	0.20	1
05298	Bromoform	75-25-2	N.D.	2.1	N.D.	0.20	1
05298	Bromomethane	74-83-9	N.D.	0.78	N.D.	0.20	1
05298	1,3-Butadiene	106-99-0	N.D.	0.88	N.D.	0.40	1
05298	2-Butanone	78-93-3	2.4	1.5	0.80	0.50	1
05298	Carbon Disulfide	75-15-0	N.D.	1.6	N.D.	0.50	1
05298	Carbon Tetrachloride	56-23-5	N.D.	1.3	N.D.	0.20	1
05298	Chlorobenzene	108-90-7	N.D.	0.92	N.D.	0.20	1
05298	Chlorodifluoromethane	75-45-6	7.7	0.71	2.2	0.20	1
05298	Chloroethane	75-00-3	N.D.	0.53	N.D.	0.20	1
05298	Chloroform	67-66-3	N.D.	0.98	N.D.	0.20	1
05298	Chloromethane	74-87-3	N.D.	0.41	N.D.	0.20	1
05298	3-Chloropropene	107-05-1	N.D.	0.63	N.D.	0.20	1
05298	Cumene	98-82-8	N.D.	0.98	N.D.	0.20	1
05298	Dibromochloromethane	124-48-1	N.D.	1.7	N.D.	0.20	1
05298	1,2-Dibromoethane	106-93-4	N.D.	1.5	N.D.	0.20	1
05298	Dibromomethane	74-95-3	N.D.	1.4	N.D.	0.20	1
05298	1,2-Dichlorobenzene	95-50-1	N.D.	1.2	N.D.	0.20	1
05298	1,3-Dichlorobenzene	541-73-1	N.D.	1.2	N.D.	0.20	1
05298	1,4-Dichlorobenzene	106-46-7	N.D.	1.2	N.D.	0.20	1
05298	Dichlorodifluoromethane	75-71-8	3.8	0.99	0.76	0.20	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.81	N.D.	0.20	1
05298	1,2-Dichloroethane	107-06-2	N.D.	0.81	N.D.	0.20	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.79	N.D.	0.20	1
05298	cis-1,2-Dichloroethene	156-59-2	74	0.79	19	0.20	1
05298	trans-1,2-Dichloroethene	156-60-5	0.89	0.79	0.23	0.20	1
05298	Dichlorofluoromethane	75-43-4	N.D.	0.84	N.D.	0.20	1
05298	1,2-Dichloropropane	78-87-5	N.D.	0.92	N.D.	0.20	1
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.91	N.D.	0.20	1
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.91	N.D.	0.20	1
05298	Ethylbenzene	100-41-4	1.8	0.87	0.42	0.20	1
05298	4-Ethyltoluene	622-96-8	N.D.	0.98	N.D.	0.20	1
05298	Freon 113	76-13-1	N.D.	3.8	N.D.	0.50	1
05298	Freon 114	76-14-2	N.D.	1.4	N.D.	0.20	1
05298	Heptane	142-82-5	N.D.	0.82	N.D.	0.20	1
05298	Hexachloroethane	67-72-1	N.D.	1.9	N.D.	0.20	1
05298	Hexane	110-54-3	0.81	0.70	0.23	0.20	1
05298	2-Hexanone	591-78-6	N.D.	2.0	N.D.	0.50	1
05298	Isooctane	540-84-1	N.D.	0.93	N.D.	0.20	1
05298	Methyl t-Butyl Ether	1634-04-4	N.D.	0.72	N.D.	0.20	1
05298	4-Methyl-2-pentanone	108-10-1	N.D.	2.0	N.D.	0.50	1
05298	Methylene Chloride	75-09-2	N.D.	0.69	N.D.	0.20	1
05298	Naphthalene	91-20-3	N.D.	2.6	N.D.	0.50	1
05298	Octane	111-65-9	0.95	0.93	0.20	0.20	1
05298	Pentane	109-66-0	2.1	0.59	0.72	0.20	1
05298	Styrene	100-42-5	N.D.	0.85	N.D.	0.20	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1.4	N.D.	0.20	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.4	N.D.	0.20	1



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Analysis Report

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Sample Description: VP-1 Air
SUMMA CAN# 1172
Plazo 2331

LL Sample # AQ 8271084
LL Group # 1637380
Account # 20826

Project Name: Plazo 2331

Collected: 03/04/2016 08:35 by PN
through 03/04/2016 09:45
Submitted: 03/04/2016 11:55
Reported: 03/16/2016 16:29

Independence Env. Consulting
1750 Kaylor Road
Hummelstown PA 17036

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
	Volatiles in Air	EPA TO-15	ug/m3	ug/m3	ppb(v)	ppb(v)	
05298	Tetrachloroethene	127-18-4	310	1.4	46	0.20	1
05298	Toluene	108-88-3	1.6	0.75	0.43	0.20	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	1.1	N.D.	0.20	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	1.1	N.D.	0.20	1
05298	Trichloroethene	79-01-6	29	1.1	5.4	0.20	1
05298	Trichlorofluoromethane	75-69-4	2.3	1.1	0.40	0.20	1
05298	1,2,3-Trichloropropane	96-18-4	N.D.	1.2	N.D.	0.20	1
05298	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.98	N.D.	0.20	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.98	N.D.	0.20	1
05298	Vinyl Chloride	75-01-4	N.D.	0.51	N.D.	0.20	1
05298	m/p-Xylene	179601-23-1	4.2	0.87	0.96	0.20	1
05298	o-Xylene	95-47-6	3.0	0.87	0.69	0.20	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MDL = Method Detection Limit

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1607130AA	03/12/2016 00:25	Jacob E Bailey	1



Sample Description: VP-2 Air
SUMMA CAN# 331
Plazo 2331

LL Sample # AQ 8271085
LL Group # 1637380
Account # 20826

Project Name: Plazo 2331

Collected: 03/04/2016 08:36 by PN
through 03/04/2016 09:43
Submitted: 03/04/2016 11:55
Reported: 03/16/2016 16:29

Independence Env. Consulting
1750 Kaylor Road
Hummelstown PA 17036

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
	Volatiles in Air	EPA TO-15	ug/m3	ug/m3	ppb(v)	ppb(v)	
05298	Acetone	67-64-1	28	1.2	12	0.50	1
05298	Benzene	71-43-2	1.1	0.64	0.33	0.20	1
05298	Bromobenzene	108-86-1	N.D.	1.3	N.D.	0.20	1
05298	Bromodichloromethane	75-27-4	N.D.	1.3	N.D.	0.20	1
05298	Bromoform	75-25-2	N.D.	2.1	N.D.	0.20	1
05298	Bromomethane	74-83-9	N.D.	0.78	N.D.	0.20	1
05298	1,3-Butadiene	106-99-0	N.D.	0.88	N.D.	0.40	1
05298	2-Butanone	78-93-3	9.5	1.5	3.2	0.50	1
05298	Carbon Disulfide	75-15-0	N.D.	1.6	N.D.	0.50	1
05298	Carbon Tetrachloride	56-23-5	N.D.	1.3	N.D.	0.20	1
05298	Chlorobenzene	108-90-7	N.D.	0.92	N.D.	0.20	1
05298	Chlorodifluoromethane	75-45-6	1.3	0.71	0.38	0.20	1
05298	Chloroethane	75-00-3	N.D.	0.53	N.D.	0.20	1
05298	Chloroform	67-66-3	N.D.	0.98	N.D.	0.20	1
05298	Chloromethane	74-87-3	N.D.	0.41	N.D.	0.20	1
05298	3-Chloropropene	107-05-1	N.D.	0.63	N.D.	0.20	1
05298	Cumene	98-82-8	N.D.	0.98	N.D.	0.20	1
05298	Dibromochloromethane	124-48-1	N.D.	1.7	N.D.	0.20	1
05298	1,2-Dibromoethane	106-93-4	N.D.	1.5	N.D.	0.20	1
05298	Dibromomethane	74-95-3	N.D.	1.4	N.D.	0.20	1
05298	1,2-Dichlorobenzene	95-50-1	N.D.	1.2	N.D.	0.20	1
05298	1,3-Dichlorobenzene	541-73-1	N.D.	1.2	N.D.	0.20	1
05298	1,4-Dichlorobenzene	106-46-7	N.D.	1.2	N.D.	0.20	1
05298	Dichlorodifluoromethane	75-71-8	3.7	0.99	0.76	0.20	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.81	N.D.	0.20	1
05298	1,2-Dichloroethane	107-06-2	N.D.	0.81	N.D.	0.20	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.79	N.D.	0.20	1
05298	cis-1,2-Dichloroethene	156-59-2	7.8	0.79	2.0	0.20	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.79	N.D.	0.20	1
05298	Dichlorofluoromethane	75-43-4	N.D.	0.84	N.D.	0.20	1
05298	1,2-Dichloropropane	78-87-5	N.D.	0.92	N.D.	0.20	1
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.91	N.D.	0.20	1
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.91	N.D.	0.20	1
05298	Ethylbenzene	100-41-4	4.6	0.87	1.1	0.20	1
05298	4-Ethyltoluene	622-96-8	1.2	0.98	0.25	0.20	1
05298	Freon 113	76-13-1	N.D.	3.8	N.D.	0.50	1
05298	Freon 114	76-14-2	N.D.	1.4	N.D.	0.20	1
05298	Heptane	142-82-5	1.9	0.82	0.45	0.20	1
05298	Hexachloroethane	67-72-1	N.D.	1.9	N.D.	0.20	1
05298	Hexane	110-54-3	1.0	0.70	0.28	0.20	1
05298	2-Hexanone	591-78-6	N.D.	2.0	N.D.	0.50	1
05298	Isooctane	540-84-1	4.6	0.93	0.98	0.20	1
05298	Methyl t-Butyl Ether	1634-04-4	N.D.	0.72	N.D.	0.20	1
05298	4-Methyl-2-pentanone	108-10-1	N.D.	2.0	N.D.	0.50	1
05298	Methylene Chloride	75-09-2	N.D.	0.69	N.D.	0.20	1
05298	Naphthalene	91-20-3	N.D.	2.6	N.D.	0.50	1
05298	Octane	111-65-9	2.3	0.93	0.49	0.20	1
05298	Pentane	109-66-0	1.9	0.59	0.63	0.20	1
05298	Styrene	100-42-5	N.D.	0.85	N.D.	0.20	1
05298	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1.4	N.D.	0.20	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.4	N.D.	0.20	1



Lancaster Laboratories
Environmental

Analysis Report

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Sample Description: VP-2 Air
SUMMA CAN# 331
Plazo 2331

LL Sample # AQ 8271085
LL Group # 1637380
Account # 20826

Project Name: Plazo 2331

Collected: 03/04/2016 08:36 by PN
through 03/04/2016 09:43
Submitted: 03/04/2016 11:55
Reported: 03/16/2016 16:29

Independence Env. Consulting
1750 Kaylor Road
Hummelstown PA 17036

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
	Volatiles in Air	EPA TO-15	ug/m3	ug/m3	ppb(v)	ppb(v)	
05298	Tetrachloroethene	127-18-4	5.3	1.4	0.78	0.20	1
05298	Toluene	108-88-3	4.4	0.75	1.2	0.20	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	1.1	N.D.	0.20	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	1.1	N.D.	0.20	1
05298	Trichloroethene	79-01-6	1.6	1.1	0.30	0.20	1
05298	Trichlorofluoromethane	75-69-4	1.6	1.1	0.29	0.20	1
05298	1,2,3-Trichloropropane	96-18-4	N.D.	1.2	N.D.	0.20	1
05298	1,2,4-Trimethylbenzene	95-63-6	2.0	0.98	0.41	0.20	1
05298	1,3,5-Trimethylbenzene	108-67-8	1.0	0.98	0.21	0.20	1
05298	Vinyl Chloride	75-01-4	N.D.	0.51	N.D.	0.20	1
05298	m/p-Xylene	179601-23-1	13	0.87	2.9	0.20	1
05298	o-Xylene	95-47-6	8.1	0.87	1.9	0.20	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MDL = Method Detection Limit

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1607130AA	03/12/2016 00:57	Jacob E Bailey	1

**Quality Control Summary**Client Name: Independence Env. Consulting
Reported: 03/16/2016 16:29

Group Number: 1637380

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ug/m3	ug/m3
Batch number: E1607130AA	Sample number(s): 8271082-8271085	
Acetone	N.D.	1.2
Benzene	N.D.	0.64
Bromobenzene	N.D.	1.3
Bromodichloromethane	N.D.	1.3
Bromoform	N.D.	2.1
Bromomethane	N.D.	1.9
1,3-Butadiene	N.D.	0.88
2-Butanone	N.D.	1.5
Carbon Disulfide	N.D.	1.6
Carbon Tetrachloride	N.D.	1.3
Chlorobenzene	N.D.	0.92
Chlorodifluoromethane	N.D.	0.71
Chloroethane	N.D.	0.53
Chloroform	N.D.	0.98
Chloromethane	N.D.	0.41
3-Chloropropene	N.D.	0.63
Cumene	N.D.	0.98
Dibromochloromethane	N.D.	1.7
1,2-Dibromoethane	N.D.	1.5
Dibromomethane	N.D.	1.4
1,2-Dichlorobenzene	N.D.	1.2
1,3-Dichlorobenzene	N.D.	1.2
1,4-Dichlorobenzene	N.D.	1.2
Dichlorodifluoromethane	N.D.	0.99
1,1-Dichloroethane	N.D.	0.81
1,2-Dichloroethane	N.D.	0.81
1,1-Dichloroethene	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.79
Dichlorofluoromethane	N.D.	0.84
1,2-Dichloropropane	N.D.	0.92
cis-1,3-Dichloropropene	N.D.	0.91
trans-1,3-Dichloropropene	N.D.	0.91
Ethylbenzene	N.D.	0.87
4-Ethyltoluene	N.D.	0.98
Freon 113	N.D.	3.8
Freon 114	N.D.	1.4
Heptane	N.D.	2.0
Hexachloroethane	N.D.	4.8
Hexane	N.D.	0.70
2-Hexanone	N.D.	2.0
Isooctane	N.D.	0.93
Methyl t-Butyl Ether	N.D.	0.72

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.



Quality Control Summary

Client Name: Independence Env. Consulting
Reported: 03/16/2016 16:29

Group Number: 1637380

Analysis Name	Result	MDL
	ug/m3	ug/m3
4-Methyl-2-pentanone	N.D.	2.0
Methylene Chloride	N.D.	0.69
Naphthalene	N.D.	2.1
Octane	N.D.	2.3
Pentane	N.D.	1.5
Styrene	N.D.	0.85
1,1,1,2-Tetrachloroethane	N.D.	1.4
1,1,2,2-Tetrachloroethane	N.D.	1.4
Tetrachloroethene	N.D.	1.4
Toluene	N.D.	0.75
1,1,1-Trichloroethane	N.D.	1.1
1,1,2-Trichloroethane	N.D.	1.1
Trichloroethene	N.D.	1.1
Trichlorofluoromethane	N.D.	1.1
1,2,3-Trichloropropane	N.D.	1.2
1,2,4-Trimethylbenzene	N.D.	0.98
1,3,5-Trimethylbenzene	N.D.	0.98
Vinyl Chloride	N.D.	0.51
m/p-Xylene	N.D.	0.87
o-Xylene	N.D.	0.87
Batch number: E1607330AA	Sample number(s): 8271083	
cis-1,2-Dichloroethene	N.D.	0.79
Tetrachloroethene	N.D.	1.4
Trichloroethene	N.D.	1.1

LCS/LCSD

Analysis Name	LCS Spike Added ug/m3	LCS Conc ug/m3	LCSD Spike Added ug/m3	LCSD Conc ug/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E1607130AA									
Acetone	25.42	31.03	25.42	31.32	122	123	61-134	1	25
Benzene	33.86	36.25	33.86	36.17	107	107	70-130	0	25
Bromobenzene	68.07	63.58	68.07	63.08	93	93	70-130	1	25
Bromodichloromethane	69.02	77.96	69.02	76.73	113	111	62-129	2	25
Bromoform	103.37	89.79	103.37	89.8	87	87	64-141	0	25
Bromomethane	38.05	40.79	38.05	40.55	107	107	70-130	1	25
1,3-Butadiene	22.57	24.96	22.57	25.74	111	114	57-138	3	25
2-Butanone	30.67	32.26	30.67	31.43	105	102	60-135	3	25
Carbon Disulfide	31.14	32.58	31.14	32.99	105	106	55-121	1	25
Carbon Tetrachloride	65.43	64.73	65.43	65.02	99	99	70-130	0	25
Chlorobenzene	48.8	48.88	48.8	49.23	100	101	70-130	1	25
Chlorodifluoromethane	37.84	46.95	37.84	47.36	124	125	70-130	1	25
Chloroethane	25.59	29.01	25.59	28.98	113	113	63-119	0	25
Chloroform	49.31	54.88	49.31	55.44	111	112	70-130	1	25
Chloromethane	21.27	27.04	21.27	26.71	127*	126*	54-118	1	25
3-Chloropropene	34.43	34.95	34.43	35.07	102	102	70-130	0	25
Cumene	51.12	46.54	51.12	47.11	91	92	70-130	1	25
Dibromochloromethane	83.49	83.55	83.49	84.94	100	102	65-127	2	25
1,2-Dibromoethane	76.83	74.52	76.83	75.56	97	98	65-126	1	25
Dibromomethane	74.65	76.07	74.65	75.42	102	101	70-130	1	25

*- Outside of specification

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Quality Control Summary

Client Name: Independence Env. Consulting
Reported: 03/16/2016 16:29

Group Number: 1637380

Analysis Name	LCS Spike Added ug/m3	LCS Conc ug/m3	LCSD Spike Added ug/m3	LCSD Conc ug/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichlorobenzene	60.72	59.84	60.72	60.11	99	99	62-132	0	25
1,3-Dichlorobenzene	63.13	63.28	63.13	63.45	100	101	63-125	0	25
1,4-Dichlorobenzene	61.33	58.01	61.33	58.48	95	95	63-127	1	25
Dichlorodifluoromethane	49.95	57.49	49.95	57.87	115	116	61-149	1	25
1,1-Dichloroethane	40.88	47.17	40.88	47.19	115	115	67-124	0	25
1,2-Dichloroethane	42.09	53.17	42.09	53.38	126	127	70-130	0	25
1,1-Dichloroethene	39.65	45.52	39.65	46.15	115	116	61-128	1	25
cis-1,2-Dichloroethene	41.63	47.15	41.63	47.32	113	114	65-121	0	25
trans-1,2-Dichloroethene	39.65	46	39.65	46.78	116	118	66-121	2	25
Dichlorofluoromethane	44.2	53.29	44.2	53.32	121	121	50-141	0	25
1,2-Dichloropropane	47.6	54.1	47.6	54.53	114	115	70-130	1	25
cis-1,3-Dichloropropene	43.12	38.68	43.12	38.01	90	88	60-165	2	25
trans-1,3-Dichloropropene	45.84	41.98	45.84	42.58	92	93	61-126	1	25
Ethylbenzene	46.03	44.17	46.03	45.16	96	98	70-130	2	25
4-Ethyltoluene	49.65	48.18	49.65	50.28	97	101	59-126	4	25
Freon 113	74.34	72.27	74.34	74.17	97	100	63-114	3	25
Freon 114	72	68.68	72	69.69	95	97	63-123	1	25
Heptane	43.03	48.74	43.03	48.06	113	112	56-123	1	25
Hexachloroethane	105.54	94.25	105.54	96.75	89	92	70-130	3	25
Hexane	35.95	35.09	35.95	36.04	98	100	63-117	3	25
2-Hexanone	44.65	48.28	44.65	50.07	108	112	47-150	4	25
Isooctane	49.06	59.62	49.06	59.8	122	122	70-130	0	25
Methyl t-Butyl Ether	36.77	35.15	36.77	35.47	96	96	52-129	1	25
4-Methyl-2-pentanone	41.78	48.36	41.78	48.66	116	116	53-140	1	25
Methylene Chloride	38.21	40.26	38.21	39.59	105	104	70-130	2	25
Naphthalene	54.53	46.77	54.53	47.05	86	86	35-153	1	25
Octane	48.12	53.7	48.12	53.6	112	111	70-130	0	25
Pentane	30.98	34.62	30.98	35.72	112	115	70-130	3	25
Styrene	44.3	40.06	44.3	40.33	90	91	64-130	1	25
1,1,1,2-Tetrachloroethane	72.77	68.96	72.77	68.04	95	94	70-130	1	25
1,1,2,2-Tetrachloroethane	73.46	79.69	73.46	79.8	108	109	58-133	0	25
Tetrachloroethene	72.57	64.76	72.57	66.06	89	91	70-130	2	25
Toluene	39.95	39.71	39.95	40.32	99	101	70-130	2	25
1,1,1-Trichloroethane	56.2	55.2	56.2	55.28	98	98	70-130	0	25
1,1,2-Trichloroethane	57.83	61.58	57.83	60.82	106	105	59-131	1	25
Trichloroethene	55.35	52.99	55.35	52.89	96	96	70-130	0	25
Trichlorofluoromethane	56.75	63.23	56.75	62.47	111	110	70-130	1	25
1,2,3-Trichloropropane	61.5	64.07	61.5	63.37	104	103	70-130	1	25
1,2,4-Trimethylbenzene	50.14	49.99	50.14	50.38	100	100	60-128	1	25
1,3,5-Trimethylbenzene	50.63	49.27	50.63	50.18	97	99	61-132	2	25
Vinyl Chloride	25.82	29.62	25.82	29.29	115	113	70-130	1	25
m/p-Xylene	42.55	40.23	42.55	40.83	95	96	70-130	1	25
o-Xylene	46.46	43.96	46.46	44.53	95	96	70-130	1	25
Batch number: E1607330AA	Sample number(s): 8271083								
cis-1,2-Dichloroethene	41.63	39.41	41.63	40.59	95	98	65-121	3	25
Tetrachloroethene	72.57	64.78	72.57	64.12	89	88	70-130	1	25
Trichloroethene	55.35	52.11	55.35	51.83	94	94	70-130	1	25

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.



Lancaster Laboratories
Environmental

Analysis Report

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Quality Control Summary

Client Name: Independence Env. Consulting
Reported: 03/16/2016 16:29

Group Number: 1637380

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
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is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Summa Canister Field Test Data/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 20826
Group # 1627380

For Eurofins Lancaster Laboratories Environmental use only
Bottle Order (SCR) # S-24622

Client Information		Turnaround Time Requested (TAT) (circle one)				Analyses Requested			
Client Name	Account #	Standard	Rush (specify)	EDD Required?	EDD Required?	Yes	No	Pressure ("Hg)	Temperature (F)
Independence Env. Cons.	<u>20826</u>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Stop	Start
Project Manager	P.O. #	Ambient		Yes	No	Yes	No	Stop	Start
Samplers	Quote #	Maximum							
Name of state where samples were collected		Minimum							
PA	Yard County								
Sample Identification	Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Flow Reg. ID	Can ID
V1-3 Ambient Indoors	3/4 0837	0937	29	1	70	14	338064	1034	6
V1-3 Sub-Slab	3/4 0839	0939	30	1	70	14	185474	837	6
V1-1	3/4 0835	0945	29	2	30	32	338065	1172	6
V1-2	3/4 0836	0943	29	1	30	32	236751	331	6
EPA 25 (select range below)									
EPA 18 <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE									
EPA TO - 15									
Helium as tracer									
O2/CO2									
Library Search									
Analyses Requested									
C1 - C4 <input type="checkbox"/>									
C2 - C4 <input type="checkbox"/>									
C3 - C4 <input type="checkbox"/>									
C1 - C10 <input type="checkbox"/>									
C2 - C10 <input type="checkbox"/>									
C4 - C10 (GRO) <input type="checkbox"/>									
Instructions/QC Requirements & Comments									
Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:		
<u>Customer</u>	<u>12/15/14</u>	<u>Customer</u>	<u>12/16/14</u>	<u>Customer</u>	<u>1/3/15</u>	<u>Customer</u>	<u>1/3/15</u>	<input checked="" type="checkbox"/> C2 - C10	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:		
<u>Customer</u>	<u>12/15/14</u>	<u>Customer</u>	<u>12/15/14</u>	<u>Customer</u>	<u>1/3/15</u>	<u>Customer</u>	<u>1/3/15</u>	<input checked="" type="checkbox"/> C2 - C10 (GRO)	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:		
<u>Customer</u>	<u>12/15/14</u>	<u>Customer</u>	<u>12/15/14</u>	<u>Customer</u>	<u>1/3/15</u>	<u>Customer</u>	<u>1/3/15</u>	<input checked="" type="checkbox"/> C2 - C10	

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300
Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300
The yellow copy should be retained by the client.

Sample Administration
Receipt Documentation Log

Doc Log ID:

138378

Group Number(s):

Client: Independence Env. Cons.

Plazo 2331

1637380

Delivery and Receipt Information

Delivery Method:	<u>Client Drop Off</u>	Arrival Timestamp:	<u>03/04/2016 11:55</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>PA</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	No	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Katie Hartlove (2114) at 12:49 on 03/04/2016

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m³	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

APPENDIX G
Mann-Kendall Statistical Test Output

**State of Wisconsin
Department of Natural Resources
Remediation and Redevelopment Program**

**Mann-Kendall Statistical Test
Form 4400-215 (2/2001)**

Notice: This form is the UNR supplied spreadsheet referenced in Appendices A of Comm 46 and NR 46, Wis. Adm. Code. It is provided to consultants as an optional tool for groundwater contaminant trend analysis to support site closure requests under s. Comm 46.07, Comm 46.08, NR 746.07, NR 746.08, Wis. Adm. Code. Use this form or a manual method when seeking case closure under those rules. Earlier versions of this form should not be used.

Instructions: Do not change formulas or other information in cells with a blue background, only cells with a yellow background are used for data entry. To use the spreadsheet, provide at least four rounds and not more than ten rounds of data that is not seasonally affected. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause "DATA ERR" or "DATE ERR" to be displayed. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends at both 80 percent and 90 percent confidence levels. If a declining trend is present at 80 percent but not at 90 percent, a site is still eligible for closure under Comm 46 and NR 746 provided that other conditions in those rules are met. If an increasing or decreasing trend is not present, an additional coefficient of variation test is used to test for stability, as proposed by Wiedemeier et al., 1999. For additional information, refer to the Interim Guidance on Natural Attenuation for Petroleum Releases, dated October 1999. Refer to the guidance for recommendations on data entry for non-detect values.

Site Name : Plaza 2331

		Compound ->		PCE		TCE	VC	Concentration (leave blank if no data)	Well Number = ARM-3			
Event Number	Sampling Date (most recent last)	Concentration (leave blank if no data)										
1	11-Jul-12	5.28	0.685			0.07						
2	26-Oct-12	8.37	0.819			0.06						
3	13-Feb-13	6.95	0.806			0.05						
4	19-Jun-13	3.65	0.529			0.04						
5	13-Nov-13	3.59	0.853			0.10						
6	4-Dec-14	10.4	1.03			0.19						
7	13-Mar-15	9.83	0.929			0.13						
8	22-May-15	7.08	0.853			0.11						
9	28-Aug-15	5.91	0.753			0.18						
10	30-Dec-15	9	1.1			0.16						
Mann Kendall Statistic (S) =		7.0	18.0			21.0		0.0		0.0		0.0
Number of Rounds (n) =		10	10			10		0		0		0
Average =		7.01	0.84			0.11		#DIV/0!		#DIV/0!		#DIV/0!
Standard Deviation =		2.414	0.164			0.054		#DIV/0!		#DIV/0!		#DIV/0!
Coefficient of Variation(CV) =		0.345	0.196			0.495		#DIV/0!		#DIV/0!		#DIV/0!
Error Check, Blank if No Errors Detected								n<4		n<4		n<4
Trend ≥ 80% Confidence Level		No Trend	INCREASING	INCREASING				n<4		n<4		n<4
Trend ≥ 90% Confidence Level		No Trend	INCREASING	INCREASING				n<4		n<4		n<4
Stability Test, If No Trend Exists at 80% Confidence Level		CV <= 1 STABLE	NA	NA				n<4		n<4		n<4
Data Entry By = PEN			Date = 29-Apr-16					Checked By =				

**State of Wisconsin
Department of Natural Resources
Remediation and Redevelopment Program**

**Mann-Kendall Statistical Test
Form 4400-215 (2/2001)**

Notice: This form is the DNR supplied spreadsheet referenced in Appendices A or Comm 46 and NR /46, Wis. Adm. Code. It is provided to consultants as an optional tool for groundwater contaminant trend analysis to support site closure requests under s. Comm 46.07, Comm 46.08, NR 746.07, NR 746.08, Wis. Adm. Code. Use this form or a manual method when seeking case closure under those rules. Earlier versions of this form should not be used.

Instructions: Use not change formulas or other information in cells with a blue background, only cells with a yellow background are used for data entry. To use the spreadsheet, provide at least four rounds and not more than ten rounds of data that is not seasonally affected. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause "DATA ERR" or "DATE ERR" to be displayed. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends at both 80 percent and 90 percent confidence levels. If a declining trend is present at 80 percent but not at 90 percent, a site is still eligible for closure under Comm 46 and NR 746 provided that other conditions in those rules are met. If an increasing or decreasing trend is not present, an additional coefficient of variation test is used to test for stability, as proposed by Wiedemeier et al, 1999. For additional information, refer to the Interim Guidance on Natural Attenuation for Petroleum Releases, dated October 1999. Refer to the guidance for recommendations on data entry for non-detect values.

Site Name : Plaza 2331 BRRTS No. = Well Number = ARM-7

Event Number	Compound ->	PCE Concentration (leave blank if no data)	TCE Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1	11-Jul-12	5.28	0.685		
2	26-Oct-12	8.37	0.819		
3	13-Feb-13	6.95	0.806		
4	19-Jun-13	3.65	0.529		
5	13-Nov-13	3.59	0.853		
6	4-Dec-14	10.4	1.03		
7	13-Mar-15	9.83	0.929		
8	22-May-15	7.08	0.853		
9	28-Aug-15	5.91	0.753		
10	30-Dec-15	9	1.1		
Mann Kendall Statistic (S) =		7.0	18.0	0.0	0.0
Number of Rounds (n) =		10	10	0	0
Average =		7.01	0.84	#DIV/0!	#DIV/0!
Standard Deviation =		2.414	0.164	#DIV/0!	#DIV/0!
Coefficient of Variation(CV) =		0.345	0.196	#DIV/0!	#DIV/0!
Error Check, Blank if No Errors Detected				n<4	n<4
Trend ≥ 80% Confidence Level	No Trend	INCREASING	n<4	n<4	n<4
Trend ≥ 90% Confidence Level	No Trend	INCREASING	n<4	n<4	n<4
Stability Test, If No Trend Exists at 80% Confidence Level	CV <= 1 STABLE	NA	n<4 n<4	n<4 n<4	n<4 n<4
Data Entry By = PEN	Date = 29-Apr-16	Checked By =			

**State of Wisconsin
Department of Natural Resources**

Remediation and Redevelopment Program

Notice: This form is the DNR supplied spreadsheet referenced in Appendices A of Comm 46 and NR /46, Wis. Adm. Code. It is provided to consultants as an optional tool for groundwater contaminant trend analysis to support site closure requests under s. Comm 46.07 Comm 46.08, NR 746.07, NR 746.08, Wis. Adm. Code. Use this form or a manual method when seeking case closure under those rules. Earlier versions of this form should not be used.

Instructions: Do not change formulas or other information in cells with a blue background, only cells with a yellow background are used for data entry. To use the spreadsheet, provide at least four rounds and not more than ten rounds of data that is not seasonally affected. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause "DATA ERR" or "DATE ERR" to be displayed. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends at both 80 percent and 90 percent confidence levels. If a declining trend is present at 80 percent but not at 90 percent, a site is still eligible for closure under Comm 46 and NR 746 provided that other conditions in those rules are met. If an increasing or decreasing trend is not present, an additional coefficient of variation test is used to test for stability, as proposed by Wiedemeier et al, 1999. For additional information, refer to the Interim Guidance on Natural Attenuation for Petroleum Releases, dated October 1999. Refer to the guidance for recommendations on data entry for non-detect values.

Site Name : Plaza 2331

Compound ->		PCE	TCE	Concentration (leave blank if no data)			
Event Number	Sampling Date (most recent last)	Concentration (leave blank if no data)					
1	11-Jul-12	0.367	0.01				
2	26-Oct-12	0.042	0.005				
3	13-Feb-13	0.001	0.001				
4	19-Jun-13	0.013	0.001				
5	13-Nov-13	0.104	0.0017				
6	4-Dec-14	0.039	0.003				
7	13-Mar-15	0.022	0.001				
8	22-May-15	0.016	0.002				
9	28-Aug-15	0.022	0.002				
10	30-Dec-15	0.031	0.003				
Mann Kendall Statistic (S) =		-8.0	-2.0	0.0	0.0	0.0	0.0
Number of Rounds (n) =		10	10	0	0	0	0
Average =		0.07	0.00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Standard Deviation =		0.110	0.003	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Coefficient of Variation(CV)=		1.667	0.930	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Error Check, Blank if No Errors Detected				n<4	n<4	n<4	n<4
Trend ≥ 80% Confidence Level		No Trend	No Trend	n<4	n<4	n<4	n<4
Trend ≥ 90% Confidence Level		No Trend	No Trend	n<4	n<4	n<4	n<4
Stability Test, If No Trend Exists at 80% Confidence Level		CV > 1 NON-STABLE	CV <= 1 STABLE	n<4	n<4	n<4	n<4
Data Entry By =		PEN	Date = 29-Apr-16	Checked By =			

APPENDIX H
Springettsbury Township Ordinance &
PaGWIS Search Information

PaGWIS Search Information

Radial Search

This retrieval approximates a radial search around a fixed location. the results will include wells in the "corners" of this figure.

Enter the coordinates of the center in decimal-degree format and the radius of the search in miles.
All fields must be filled in to perform the search. The longitude must be a negative number.

Multiple Criteria Polygon Search Radial Search

Longitude : -76.681269

Latitude : 39.974595

Radius in Miles : 0.25

[Preview List](#) [Create List](#) [Clear Selections](#)

"Preview List" creates a list which contains links to individual well information.

You can choose to create a comma separated list from the preview.

"Create List" creates a comma separated list without viewing the selection first.

If you choose to open the file it may open in Excel if you have Microsoft Office installed.

Total Records Returned : 24 Records Click on the column headers to sort the Search Results.

Shows rows: 20 ▼ Page 1 of 2							
<u>PA Well ID</u>	<u>Driller</u>	<u>Driller Ref</u>	<u>Date Drilled</u>	<u>Owner</u>	<u>County</u>	<u>Municipality</u>	<u>Image</u>
596298	EICHELBERGERS INC.	KR14100-GTA10	11/14/2014	ELLIOTT AND BUCHART	YORK	SPRINGETTSBURY TWP.	
596302	EICHELBERGERS INC.	KR14100-GTA11	11/14/2014	ELLIOTT AND BUCHART	YORK	SPRINGETTSBURY TWP.	
596303	EICHELBERGERS INC.	KR14100-GTA12	11/14/2014	ELLIOTT AND BUCHART	YORK	SPRINGETTSBURY TWP.	
475044	ODYSSEY ENVIRONMENTAL SERVICES, INC.	MW_11	1/5/2011	SUNOCO INC. (R&M)	YORK	SPRINGETTSBURY TWP.	
497087	ODYSSEY ENVIRONMENTAL SERVICES, INC.	MW_10	1/5/2011	SUNOCO INC. (R&M)	YORK	SPRINGETTSBURY TWP.	
475043	ODYSSEY ENVIRONMENTAL SERVICES, INC.	MW-9	1/5/2011	SUNOCO INC. (R&M)	YORK	SPRINGETTSBURY TWP.	
600058	EICHELBERGERS INC.	KG01194(MW14)	9/20/2001	SUNOCO	YORK	SPRINGETTSBURY TWP.	
622435	EICHELBERGERS INC.	KG01194(MW12)	9/20/2001	SUNOCO	YORK	SPRINGETTSBURY TWP.	
600057	EICHELBERGERS INC.	KG01194(MW13)	9/20/2001	SUNOCO	YORK	SPRINGETTSBURY TWP.	
617526	EICHELBERGERS INC.	JM01104(MW8)	8/15/2001	COCOA COLA COMPANY	YORK	SPRINGETTSBURY TWP.	
624978	EICHELBERGERS INC.	JM01104(MW2)	8/15/2001	COCOA COLA COMPANY	YORK	SPRINGETTSBURY TWP.	

Springettsbury Township Ordinance

*Township of Springettsbury, PA
Friday, April 22, 2016*

Chapter 289. Subdivision and Land Development

Article VI. Design Standards

§ 289-46. Water supply requirements.

- A. Where there is an existing public water supply system within 1,000 feet of the nearest point of the proposed development, a complete water supply system connected to the existing public water supply system must be provided.
- B. Where plans approved by a public water supplier provide for the installation of such public water facilities within six years, the developer shall provide a complete water supply system ready to be connected to the proposed water supply system.
- C. If water is to be provided by means other than by private wells owned and maintained by the individual owners of lots within the subdivision or development, applicants shall present evidence to the Board of Supervisors or Planning Commission, as the case may be, that the subdivision or development is to be supplied by a certified public utility, a bona fide cooperative association of lot owners, or by municipal corporation, authority or utility. A copy of a certificate of public convenience from the Pennsylvania Public Utility Commission or an application for such certificate, a cooperative agreement or a commitment or agreement to serve the area in question, whichever is appropriate, shall be acceptable evidence.
- D. Where there is no existing public water supply system and the feasibility report indicates that connection to a public water supply system is not feasible, each lot in the development must be provided with an individual water supply system in accordance with minimum standards approved by the DEP prior to the issuance of a building permit.

*Township of Springettsbury, PA
Friday, April 22, 2016*

Chapter 319. Water

Article II. Connection to System in Mundis Mill Water District

§ 319-13. Disconnection of private water supply systems.

- A. Upon the connection of any building to the public water system, the internal water and plumbing system of such building connected to any individual on-lot or private water system shall be immediately disconnected and private wells properly abandoned, except as allowed pursuant to Subsection **B** of this section.
- B. Existing on-lot or private water systems may, with the approval of the York Water Company and the Pennsylvania Department of Environmental Protection, be maintained and used for irrigation, livestock, fire protection, or other purposes not prohibited by York Water Company's operation policies. In no event shall there be any cross-connection of any on-lot or private water system with the system supplied by the public water system.

*Township of Springettsbury, PA
Friday, April 22, 2016*

Chapter 325. Zoning

Article XXXIV. Energy Conversion Systems

§ 325-212. Geothermal energy system requirements.

- A. No person shall install, construct, drill or excavate to facilitate the construction or installation of a geothermal energy system for use as a heating and/or cooling system for a structure without first obtaining a geothermal energy system permit from the Township. No person shall drill or excavate to repair or modify or to facilitate the repair or modification of a geothermal energy system in the Township without first obtaining a zoning permit.
- B. All geothermal energy systems shall be closed systems. No open loop ground-source heat pump systems shall be permitted.
- C. The installation specifications and drawings for the geothermal energy system shall be submitted to and approved by the Township as conforming to the International Ground-Source Heat Pump Association (IGSPA) installation standards, as the same may be amended and updated from time to time, and currently found in Appendix 1 of the GSHP Manual of the DEP.
- D. Grout shall be mixed, pumped and placed in accordance with the procedures recommended by the International Ground-Source Heat Pump Association (IGSPA) in its publication entitled "Grouting Procedures for Ground-Source Heat Pump Systems" (available from Ground-Source Heat Pump Publications, Oklahoma University, Stillwater Oklahoma). Acceptable grout materials are as follows:
 - (1) Neat cement (no more than six gallons of water per ninety-four-pound bag of cement).
 - (2) High solids clay bentonite grout (not bentonite gel).
 - (3) A material approved for use by the Township's consulting engineer or other Township representative.
- E. The vertical geothermal energy well (or wells) installation shall be made only by a Pennsylvania-licensed well driller.
- F. No geothermal energy system shall be located within 100 feet of any existing drinking water wells or any planned drinking water wells.
- G. With respect to each geothermal energy well installation, before activation of the geothermal energy system, the Pennsylvania-licensed well driller and/or geothermal energy installer shall provide the Township:
 - (1) Accurate written records and a written geologic log.
 - (2) Accurate records with respect to grouting for each such well.
 - (3) As-built plans and related documentation for each such system and well location.

- (4) Written documentation of the geothermal energy system testing and certification.
- (5) A written plan for the operation of the geothermal energy system (which meets specifications of the manufacturer of the geothermal energy system equipment and is approved by the system installer) which, among other matters, provides that:
 - (a) Any geothermal energy system leaks or releases will be reported by the applicant (and subsequent owners) to the Zoning Officer and the Township Police Department within 24 hours of the discovery of same, and the applicant (and subsequent owners) covenants and agrees to take all appropriate action to minimize any fluid release to the ground and to promptly repair any system leaks.
 - (b) In the event of the proposed discontinuance of the use of the geothermal energy system, a system closure plan will be prepared and submitted to the Township for its approval.
- H. All geothermal energy systems in areas underlain by carbonate bedrock must be vertical loop systems. Outside the carbonate bedrock areas, either vertical or horizontal closed loop geothermal energy system may be used, subject, however, to the review and approval of the plans for the same by the Township.
- I. No geothermal energy system shall be connected in any way to any sanitary or stormwater sewage disposal system.
- J. The piping for geothermal energy systems must be made of polyethylene or polybutylene or a material approved by the Township.
- K. Only water or potassium acetate may be used as the circulating fluid for geothermal energy systems, unless similar inert fluid is approved for use by the Township.

APPENDIX I
Draft Environmental Covenant

ENVIRONMENTAL COVENANT

When recorded, return to:

Morris & Vedder, LLP
32 North Duke Street
P.O. Box 149
York, PA 17405

The County Parcel Identification No. of the Property is: 460000200270000000

GRANTOR: Barbara B. Elliott

**PROPERTY LOCATION: 2331 East Market St., Springettsbury Township,
York County, PA**

THIS ENVIRONMENTAL COVENANT is executed pursuant to the Pennsylvania Uniform Environmental Covenants Act, Act No. 68 of 2007, 27 Pa. C.S. §§ 6501 – 6517 (UECA). This Environmental Covenant subjects the Property identified in Paragraph 1 to the activity and/or use limitations in this document. As indicated later in this document, this Environmental Covenant has been approved by the Pennsylvania Department of Environmental Protection (“Department”).

1. **Property affected.** The property affected (“Property”) by this Environmental Covenant is located in Springettsbury Township, York County, Commonwealth of Pennsylvania.

The postal street address of the Property is: 2331 East Market Street, York, PA 17402.

The latitude and longitude of the center of the Property affected by this Environmental Covenant is: 39.974572, -76.681285 (WGS84 datum).

The Property has been known by the following name(s): Plaza 2331.

The Pennsylvania Department of Environmental Protection's Primary Facility ID is 755049.

The Property consists of one parcel (UPI No. 460000200270000000), as more fully described in EXHIBIT A, attached hereto. A map of the Property is attached to this Environmental Covenant as EXHIBIT B.

2. **Property Owner / Grantor / Grantee.** Barbara B. Elliott is the fee simple title owner of the Property and the GRANTOR and the GRANTEE of this Environmental Covenant.

3. **Mailing Address – Property Owner.** The mailing address of the owner is: 104 Ogontz Street, York, PA 17403.

4. **Description of Contamination and Remedy.**

a. The Property has been and continues to be used as a strip shopping center.

b. The Property has been the subject of extensive investigations which were conducted for site characterization, and the findings of those investigations were submitted to the Department in a report titled "*Combined Remedial Investigation Report*

& Final Report, Plaza 2331 Commercial Property", dated April 29, 2016. The site characterization concluded that soils, groundwater, and indoor air are impacted with chlorinated volatile organic compounds (CVOCs) originating from dry cleaning fluids. The source of CVOCs appears to occur at a loading dock at the rear of the building improvements at the Property.

(1) Site characterization has documented the occurrence of:

(a) Site Soils. Perchloroethene (PCE), trichloroethene (TCE), and cis-1,2-dichloroethene (cis-1,2-DCE) in site soils at concentrations that exceed medium-specific concentrations (MSCs) established under the Statewide Health Standard of Pennsylvania's Land Recycling Program, commonly referred to as Act 2;

(b) Groundwater. PCE, TCE, cis-1,2-DCE, and vinyl chloride have been detected in groundwater migrating beyond the Property boundary at concentrations that exceed MSCs; and

(c) Indoor Air. PCE and TCE have been detected in the air within the indoors of the building at the Property at concentration levels that exceed MSCs.

(2) Acceptable remedies to manage the documented results of the site characterization report(s) are as follows:

(a) Site Soils. Engineering controls consisting of impervious surfaces (an existing building and/or asphalt paving) constitute an acceptable remedy to eliminate the direct contact pathway for exposure to PCE, TCE, and cis-1,2-DCE, and such surfaces will be maintained at all times (except as provided in Section 10 of this Environmental Covenant) to ensure that the direct contact pathway remains incomplete.

(b) Groundwater. Institutional controls that mandate connection to the existing public water supply distribution system will be relied upon to ensure that the pathway for consumption is eliminated and remains incomplete for the residential properties located downgradient of the Property.

(c) Indoor Air. A sub-slab depressurization system will be installed and operated for continuous ventilation of soil gases containing vapor-phase CVOCs to ensure that vapors do not migrate into the building and do not affect indoor air quality.

c. The CVOCs associated with the Property will be remediated by the engineering and institutional controls described above as well as the activity and use limitations detailed below. The results of this remedial action are detailed in a Final Report that was prepared pursuant to 25 PA Code §250.411.

d. The site impacts do not present an unacceptable risk to human health or the environment pursuant to Act 2 criteria.

e. This Environmental Covenant is executed pursuant to the Pennsylvania Uniform Environmental Covenants Act, Act No. 68 of 2007, 27 Pa. C.S. §§ 6501 – 6517

(UECA). This Environmental Covenant subjects the Property to the activity and/or use limitations in Section 5 of this Environmental Covenant.

f. This Environmental Covenant has been approved by the Department, in writing.

5. **Activity and Use Limitations**.

a. **Pavement or Concrete Cap**.

(1) **Use Limitation**. An impervious cap, composed of the existing commercial building (or its future replacement of equivalent material) and/or asphalt paving will be maintained over the entire 1.438-acre Property (except as provided in Section 10 of this Environmental Covenant).

(2) **Emergencies**. In the event of any emergency, the application of Section 5.a.i above may be temporarily and unilaterally suspended by Barbara B. Elliott, or the then current owner, provided that Barbara B. Elliott, or then current owner:

(a) Implements reasonable measures necessary to limit risk of exposure to the residual contamination to humans or the environment; and

(b) Restores the Property to the pre-emergency conditions to the extent reasonably possible.

(3) **Alterations**. Barbara B. Elliott, or the then current owner may make alterations in, to, or about the Property provided Barbara B. Elliott, or then current owner:

(a) Provides for restoration of the engineering controls to pre-disturbance conditions, or replaces engineering controls with controls which provide equal or greater protection to human health and the environment and modifies the Environmental Covenant as described in paragraph 10; and

(b) Insures that all applicable Federal, State and local laws and regulations, including worker health and safety laws and regulations, are followed during the alteration, improvement, or disturbance.

(4) **Handling of Impacted Soils**. Handling and disposal of soil at the Property shall be conducted in accordance with federal, state, and local regulations and best management practices.

(5) **Notice to the Department**. If the pavement or concrete at the Property is disturbed or changed for any reason, Barbara B. Elliott or the then owner shall notify the Department in writing, which notice shall include a health and safety plan relating to the potential encounter and handling of soil at the Property to address issues associated with encountering the impacted soil.

b. **Groundwater Use**. The groundwater at the Property shall not be used for any purposes, including but not limited to drinking or agricultural purposes, except, however, groundwater monitoring, without the prior written approval of the Department.

c. Indoor Air Quality. A sub-slab depressurization system shall be maintained and operated at all times for protection of indoor air quality.

d. Use. The Property shall be used exclusively for non-residential purposes.

e. Institutional Controls. Institutional controls will conform to the Uniform Environmental Covenants Act of 2008.

6. **Notice of Limitations in Future Conveyances.** Each instrument hereafter conveying any interest in the Property subject to this Environmental Covenant shall contain a notice of the activity and use limitations set forth Section 5 of this Environmental Covenant and shall provide the recorded location of this Environmental Covenant.

7. **Compliance Reporting.** After written request by the Department, the then current owner of the Property shall submit, to the Department, written documentation stating whether or not the activity and use limitations in this Environmental Covenant are being abided by. In addition, within 1 month after any of the following events, the then current owner of the Property shall submit, to the Department, written documentation regarding: noncompliance with the activity and use limitations in this Environmental Covenant; transfer of the Property; material changes in use of the Property; or filing of applications for building permits for the Property and any proposals for any site work, if any building or proposed site work will affect the contamination on the Property subject to this Environmental Covenant.

8. **Access by the Department.** In addition to any rights already possessed by the Department, this Environmental Covenant grants to the Department a right of reasonable access of the Property in connection with implementation or enforcement of this Environmental Covenant.

9. **Recording & Proof & Notification.** Within thirty (30) days after the date of the Department's approval of this Environmental Covenant, Barbara B. Elliott shall file this Environmental Covenant with the Recorder of Deeds for York County, and send a file-stamped copy of this Environmental Covenant to the Department within sixty (60) days of recording. Within that time period, Barbara B. Elliott also shall send a file-stamped copy to each of the following: Jefferson Borough and the Pennsylvania Department of Transportation

10. **Termination or Modification.** This Environmental Covenant may only be terminated or modified in accordance with Section 9 of UECA, 27 Pa. C.S. § 6509, including as follows:

a. This Environmental Covenant shall terminate upon attainment, in accordance with 35 P.S. §§ 6026.101 – 6026.908, with an unrestricted use remediation standard for the above-described contamination at the Property. The Department must approve, in writing, any such termination.

b. The following language provides an option for not requiring the consent of Barbara B. Elliott: "In accordance with Section 10 of UECA, 27 Pa. C.S. § 6510(a)(3)(i), the Barbara B. Elliott, hereby waives the right to consent to any amendment or termination of the Environmental Covenant by consent; it being intended that any amendment to or termination of this Environmental Covenant by consent in accordance with this Paragraph requires only the following signatures on the instrument amending or terminating this Environmental Covenant: (i) the Holder at the time of such amendment or termination; (ii) the then current owner of the Property, and (iii) the Department."

11. **General Provisions.**

a. **Run with the Land.** Barbara B. Elliott, agrees that the rights, privileges, covenants and agreements provided in this Environmental Covenant shall run with the land of the Property, subject, however, to the termination or amendment of this Environment Covenant as provided in Section 10 of this Environmental Covenant.

b. **Parties Bound.** This Environmental Covenant is legally binding upon and inures to the benefit of Barbara B. Elliott, and her heirs, administrators, successors and assigns.

c. **Notice.** Any notice required or permitted to be delivered hereunder shall be deemed received when sent by United States mail, postage prepaid, certified mail, return receipt requested, addressed as follows:

(1) If to the then Property Holder, at the same address as shown on the records of the Assessment Bureau of York County.

(2) If to the Department, Section Chief, Environmental Cleanup Program, 909 Elmerton Ave., Harrisburg, PA 17101.

d. **Applicable Law.** This Environmental Covenant shall be construed and enforced exclusively in accordance with the internal laws of the Commonwealth of Pennsylvania.

e. **Severability.** The paragraphs of this Environmental Covenant shall be severable and should any part hereof be declared invalid or unenforceable, the remainder shall continue in full force and effect between the parties.

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ACKNOWLEDGMENT by the Owner, in the following form:

Barbara B. Elliott

Date: _____, 2016

APPROVED, by Commonwealth of Pennsylvania,
Department of Environmental Protection

By: _____

Name: _____

Title: _____

Date: _____, 2016

COMMONWEALTH OF PENNSYLVANIA)
)
COUNTY OF _____)
)

ON THIS, the _____ day of _____, 2016, before me, the undersigned officer, personally appeared **BARBARA B. ELLIOTT**, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that she executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto have set my hand and official seal.

Notary Public

COMMONWEALTH OF PENNSYLVANIA)
)
COUNTY OF _____)
)

On this _____ day of _____, 2010, before me, the undersigned officer, personally appeared _____, who acknowledged himself/herself to be the _____ [Title] of the Commonwealth of Pennsylvania, Department of Environmental Protection, _____ [insert name of regional office], whose name is subscribed to this Environmental Covenant, and acknowledged that s/he executed same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

Notary Public



Vapor Intrusion Assessment/Mitigation Work Plan

Subject Property:
Plaza 2331
2331 East Market Street
Springettsbury Township
York County, Pennsylvania

Prepared for:
2331 East Market Street, LLC
4235 Beaumont Road
Dover, Pennsylvania 17315

Prepared by:
Environmental Products & Services of Vermont, Inc.
1539 Bobali Drive
Harrisburg, Pennsylvania 17104
Phone: (717) 564-4200
Fax: (717) 939-6594
Website: www.epsofvermont.com

January 31, 2019

EPSVT Project No. G11788

Prepared By:

A handwritten signature in blue ink that appears to read "Steven R. Vedder".

Steven R. Vedder, BS
Senior Environmental Scientist

Reviewed By:

A handwritten signature in blue ink that appears to read "Kyle Schuch".

Kyle Schuch
Project Manager

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PART I INTRODUCTION

At the request of 2331 East Market Street, LLC (Client), Environmental Products & Services of Vermont, Inc. (EPSVT) has prepared this Work Plan to complete vapor intrusion assessment and mitigation activities to address contamination at the property located at 2331 East Market Street in Springettsbury Township, York County, Pennsylvania ("Subject Property") (GPS coordinates: 39.974536°N, -76.681554°W). This Work Plan includes in-situ treatment of the sub slab and near source vadose zone with the purpose of obtaining indoor air quality data demonstrating that the VI pathway does not pose any significant risk without operation of any mitigation system. This Work Plan is not intended to include all tasks necessary to fully delineate contaminant impacts at the Subject Property or demonstrate attainment of a standard(s) as set forth in Pennsylvania's Land Recycling and Environmental Remediation Standards Act (Act 2).

Site Description

The Subject Property (York County Parcel ID #460000200270000000) is a 1.44 acre "T" shaped tract of land zoned as Commercial and owned by Barbara Elliot (**Figure 1**, Subject Property Location Map). The Subject Property is occupied by a 2-story multiple tenant retail building (Site building) and a concrete pad associated with a razed structure (pad), both of which are surrounded by asphalt paved parking lot. Two small landscaped islands with maintained grass are present along the southern side (front side) of the Site building. Access to the Subject Property is provided via two curb cuts off East Market Street, one curb cut off Memory Lane, and one curb cut off North Royal Street (**Figure 2**).

The Site building is an approximately 10,705-square foot structure with poured concrete flooring, concrete masonry unit (CMU) block exterior walls, CMU block and wooden frame interior walls, and flat ethylene propylene diene monomer (EPDM) roofing. The southern portion of the Site building has concrete slab-on-grade flooring and a 1,000-square foot second story. The northern portion of the Site building is underlain by a partially exposed basement with concrete slab flooring, and a concrete loading dock servicing the ground floor along the western side. The basement concrete flooring is comprised of three separate slabs at different elevations. The eastern and western basement floor concrete slabs are approximately 3 feet lower than the central portion of the floor (**Figure 3**).

The Site building is serviced by public water and sanitary sewer with laterals off of East Market Street (which is a portion of the southern boundary). A mechanical room is located in the southeastern corner of the western basement floor slab, which is adjacent to central portion of the basement floor slab. A sewer sump that services the entire building is located in the mechanical room. Two restrooms on the ground floor of the southern portion of the Site building, and two restrooms on the basement floor of the northern portion of the Site building reportedly drain to the sewer sump.

A sub-slab depressurization (SSDS) system is present in the mechanical room. The SSDS system was installed with two sub slab penetrations, one vertical penetration through the concrete floor in the mechanical room that draws from beneath the western basement slab and one horizontal penetration through the concrete block wall in the mechanical room that draws from beneath the central basement slab. The SSDS is powered by one RadonAway XP 151 electric fan that operates at approximately 0.7 inches of water column (WC), which equates to approximately 100 cubic feet per minute (CFM). The SSDS system is vented through a PVC/ductile iron piping to the roof top along the northern exterior wall of the Site building.

The Site building is heated/cooled by multiple natural gas fired forced air HVAC (heating, ventilation, and air conditioning) units. The ground floor and second story is serviced by root top HVAC units (RTUs). The western and central portions of the basement are serviced by two HVAC units located in the mechanical room. The eastern portion of the basement (e.g., the vault) is serviced by a HVAC unit located along the northern exterior wall in the vault.

The Subject Property is surrounded by commercial properties and East Market Street followed by additional commercial properties to the south, commercial and residential properties followed by Kent Road and additional commercial and residential properties to the north, commercial properties and Memory Lane followed by commercial properties to the east, and residential and commercial properties and North Royal Street followed by additional residential properties to the west.

Background

According to information contained in previous reports and historical documents reviewed in preparation of this Work Plan, the Subject Property was developed with the current Site building in 1956. A dry cleaning operation occupied a portion of the Site building from 1956 until the early 1970's. According to information provided by the current property owner (Ms. Barbara Elliot), no dry cleaning operations have taken place in the Site building since at least 1976 (which is the year Ms. Elliot's father purchased the Subject Property). Investigative activities completed at the Subject Property have identified dry cleaning solvent contamination in the soil, groundwater, near source soil vapor, sub slab soil vapor, and indoor air of the Site building. Dry cleaning related solvents identified at the Subject Property include trichloroethylene (TCE), tetrachloroethylene (PCE), 1,1,1-trichloroethane, 1,1-dichloroethylene (DCE), cis-1,2 DCE, trans-1,2 DCE, carbon disulfide, 2-butanone (MEK), methylene chloride, dichlorodifluoromethane, and vinyl chloride (Tables 1 and 2). Other contaminants detected include acetone, benzene, ethylbenzene, 4-ethyltoluene, hexane, isoctane, n-Hexane, toluene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB. Summaries for analysis performed on groundwater, soil, and soil gas/indoor air samples are provided in **Tables 1, 2, and 3**, respectively.

Several of these dry cleaning related solvents have been detected in a sub slab vapor sampling point (designated VP-3) beneath the concrete floor in the mechanical room at concentrations above Non-Residential Sub-Slab Soil Gas Statewide Health Standard

(SHS) Vapor Intrusion (VI) Screening Vales including cis-1,2 DCE, PCE, TCE, and vinyl chloride. Dry cleaning related solvents have also been detected at two different indoor air sampling points (designated IA-Basement-01 and IA-2 (WIS) at concentrations above Non-Residential Indoor Air SHS VI Screening Values. IA-Basement-01, which is located in the Site building basement directly adjacent to the door leading into the mechanical room, has contained elevated concentrations of PCE, TCE, and cis-1,2 DCE. IA-2 (WIS), which is the tenant space in the basement (designated H1) located adjacent to the east of the mechanical room, has contained elevated concentrations of PCE and TCE.

PART II

Proposed Vapor Intrusion Assessment Activities

In order to further characterize the extent of impacts to the indoor air quality (IAQ) of the Site building, and develop an appropriate scope for design/installation of a mitigation system and completion of IAQ monitoring, VI assessment in the Site building and along the downgradient (western and northern) boundaries of the Subject Property is necessary.

Preferential Pathway Investigation

A geophysical survey will be completed in an attempt to identify all existing subsurface utilities or other structures that could provide preferential pathways for contaminant migration. The geophysical survey will include a combination of techniques including ground penetrating radar, electromagnetics (EM) with a Geonics EM-61 MK2 instrument, and a radiodetection CAT & Genny system and a Rediodetection RD8000 digital cable and pipe locator and transmitter.

Preliminary Supply Well Search

The purpose of the preliminary search will be to identify the presence of any potential water supply wells located crossgradient and/or downgradient of the subject site within a radius of 0.25 miles. The preliminary search will include a review of reasonable accessible online databases, a review of Springettsbury Township and York Water Company records (including the township ordinance for the use of supply wells), and a “door to door” survey.

Baseline IAQ Sampling

Collection and analysis of IAQ samples from fourteen separate locations will be completed (eight from the basement floor, five from the ground floor, and one from ambient air outside the Site building). The samples will be collected using laboratory supplied 6-liter Summa™ canisters for a 8-hour duration with a flow of 200 milliliters/minute (mL/min) or less. The existing SSDS will be shut down during the baseline IAQ sampling. The baseline sampling will be performed during winter months with all HVAC units operating under normal settings. IAQ samples will be collected/analyzed via EPA method TO-15 for a project specific shortlist of compounds including benzene, MEK, carbon disulfide, cis 1,2-DCE, trans 1,2-DCE, 1,1-DCE, dichlorodifluoromethane, ethylbenzene, 4-ethyltoluene, methylene chloride, 1,1,1-TCE, toluene, PCE, TCE, 1,2,4-TMB, 1,3,5-TMB, vinyl chloride, and xylenes (project shortlist).

A plan showing the proposed IAQ sampling locations is provided as **Figure 4**. Sampling locations were selected based on existing function spaces, apparent contaminant source area(s), and potential preferential pathways (e.g., bathrooms with sewer lines leading to the sewer sump. The actual number and/or location(s) of the IAQ samples will be revised as needed to address any additional preferential pathways identified during investigative activities described above.

Sub Slab Characterization

Characterization activities will include sealing of potential soil vapor infiltration points (e.g., crack in concrete flooring, expansion joints, previously installed penetrations in the concrete flooring, etc.), completion of sub slab communication testing, and the installation of soil borings.

Differential pressure field extension testing (e.g., sub slab communication testing) will be completed to determine the number of suction holes that may be needed, and the performance requirements of the radon fan(s) and piping to be specified for the SSDS system that will be installed to mitigate the contaminants identified in the IAQ of the Site building. The communication testing will be performed for each of the three separate basement concrete slab elevations (western, central, and eastern). The suction holes (0.75 to 1.5 inch hole) for the western and central slab elevations will be placed in the mechanical room, and the suction hole for the eastern slab elevation will be placed in the vault. A standard shop vacuum is used to draw air out of this small suction hole. At varying distances from the shop vacuum suction a smaller test hole (typically 3/8-inch diameter) is drilled through the slab, and a digital micro-manometer is used to measure the pressure change between the sub slab and the room with the vacuum off and then on. The existing SSDS will be shut down during the communication testing. The data collected will be utilized to calculate anticipated flow of air in the sub slab, as well as an area of influence for a suction hole.

Soil borings will be extended in various locations throughout the basement to log the lithology beneath the Site building, screen for the presence of impacts via visual and olfactory assessment and screening for VOCs with a photoionization detector, and allow for the collection of depth discrete soil samples for laboratory analysis. Any samples will be collected with single use disposable gloves and laboratory supplied bottleware preserved with appropriate reagents, placed in a cooler on ice, and transported to an accredited laboratory under proper chain of custody (COC) procedures. Samples will be collected/analyzed via EPA methods 5035/8260 for the project shortlist.

Soil Gas Characterization

Six soil gas sampling points will be installed at the Subject Property via an approximately 2-inch diameter borehole. Two of the six points will be installed along the western boundary between the pad and the adjacent residential properties. The two of the six points will be installed along the northern boundary between the Site building and the commercial buildings. The remaining two points will be installed along the southern boundary (along the railroad tie retaining wall), west of the loading dock in a suspected source area, and adjacent to the north of the multiple tenant commercial building (e.g., Lot 28).

A plan showing the proposed soil gas sampling locations is provided as **Figure 5**. Sampling locations were selected based on existing potential sensitive receptors (e.g., adjacent residential and commercial buildings). The actual number and/or location(s) of the soil gas samples will be revised as needed to address any additional sensitive

receptor or preferential pathways identified during investigative activities described above.

An attempt will be made to install the semi-permanent sampling points to within approximately 1-foot of the capillary fringe as determined by the static water levels (SWLs) recorded in the ARM Group, Inc. well completion logs from February 2012 (**Well Logs**), or a minimum depth of 5 feet below ground surface (bgs). The construction of each point will include a six inch long 0.25-inch diameter screened steel vapor sampling implant connected to 0.25-inch diameter poly tubing with a hose barb at the ground surface. The annular space of the borehole will be filled with filtration sand in the depth intervals of the screened interval of the sampling point (e.g., sand from the bottom of the borehole extended up to approximately 0.5 feet above the implant). The remaining annular space will be sealed with bentonite seal. Each of the locations will be finished with a protective flush mount drive over cover.

One round of soil gas samples will be collected from each of the four points. The newly installed sampling points will be allowed to equilibrate for a minimum of 24 hours prior to sampling. The samples will be collected using laboratory supplied 1-liter Summa™ canisters for a 30-minute duration with a flow of 200 mL/min or less. Prior to collection, a shut-in test will be performed on the sampling train pursuant to protocols set forth in the Land Recycling Program Technical Guidance Manual for VI into Buildings from Groundwater and Soil under Act 2 (VI Guidance). Once each sampling train passes the shut-in test, purging and sampling will be conducted in accordance with protocols set forth in the VI Guidance (including purging a minimum of three sampling train volumes at a rate of less than 200 mL/min and use of a helium shroud as a means of leak detection during purging). Soil gas samples will be collected/analyzed via EPA method TO-15 for the project shortlist.

PART III

DESIGN, INSTALLATION, AND MONITORING OF THE VAPOR MITIGATION SYSTEM

The data generated during the VI assessment activities described in Part II of this Work Plan will be utilized to design and install a SSDS capable of mitigating the exposure of the identified contaminant vapors in the indoor air of the Site building. Once installed a pilot test for the SSDS will be conducted to ensure functionality, and determine the contaminant concentration load in the system exhaust. It is anticipated that the vent line for the existing SSDS will be utilized for the newly designed system. A sample will be collected from the SSDS exhaust using laboratory supplied 1-liter Summa™ canisters for a 30-minute duration with a flow of 200 mL/min or less, and analyzed via EPA method TO-15 for the project shortlist. The results of the laboratory analysis will allow design for any necessary filtration of the SSDS exhaust.

During the pilot test under normal operational settings, sub slab communication confirmation will be conducted with a digital micro-manometer to measure the pressure difference in locations across the floor slab, ensure that operations does not result in back-drafting of combustion appliances, and determine if any alterations/additions to the SSDS are needed.

IAQ monitoring will be completed following installation to confirm that operation of the SSDS is mitigating the exposure to contaminant concentrations above Non-Residential Indoor Air SHS VI Screening Values. Bi-annual monitoring will be completed to account for temporal variation in contaminant migration. The results of the bi-annual monitoring will be provided to the PADEP in a short letter report for review.

Implementation of a SSDS to mitigate the VI pathway is an institutional control. A requirement for maintaining the SSDS must be documented in an environmental covenant to ensure the VI pathway to the IAQ is sufficiently mitigated. The final SSDS specifications, a site plan(s) depicting the construction of the SSDS, the documentation of confirmation monitoring, and a draft of the environmental covenant will be submitted in a report to the PADEP for review/approval. Once the environmental covenant is approved, it will be recorded on the deed for the Subject Property. The environmental covenant must be maintained until such time that sampling data can be obtained demonstrating that the VI pathway does not pose any significant risk without operation of any mitigation system.

PART IV

PROPOSED IN-SITU TREATMENT

In an attempt to reduce the concentrations of contaminants in the indoor air of the Site building, VaporRemed and/or AgroRemed will be applied to the sub slab and near source vadose zone. The application of VaporRemed and/or AgroRemed will be performed by the product manufacturer at a rate and frequency specified by the manufacturer. Any monitoring of the sub slab vapor for reduction in contaminant concentrations will be conducted with the SSDS turned off at a frequency specified by the manufacturer. All monitoring samples will be collected using laboratory supplied 1-liter Summa™ canisters for a 30-minute duration with a flow of 200 mL/min or less. Prior to collection, a shut-in test will be performed on the sampling train pursuant to protocols set forth in the VI Guidance. Once each sampling train passes the shut-in test, purging and sampling will be conducted in accordance with protocols set forth in the VI Guidance (including use of a helium shroud as a means of leak detection during purging). Sub slab vapor samples will be collected/analyzed via EPA method TO-15 for the project shortlist.

The goal of the in-situ treatment and monitoring is to obtain data demonstrating that the VI pathway does not pose any significant risk without operation of any mitigation system.

PART V CONCLUSIONS

EPSVT has drawn the following conclusions based on the information gathered during development of this Work Plan for the Subject Property located at 2331 East Market Street, Springettsbury Township, York County, Pennsylvania.

- The Site building is a multiple tenant commercial structure with a partial basement that was occupied by dry cleaning operations between 1959 and the mid-1990s. Investigative activities completed at the Subject Property have identified dry cleaning solvent contamination in the soil, groundwater, near source soil vapor, sub slab soil vapor, and indoor air of the Site building.
- Proposed VI assessment activities include preferential pathway investigation, preliminary supply well search, baseline IAQ sampling, sub slab characterization, and soil gas characterization. Protocols outlined in the VI Guidance will be followed for data procurement as part of VI assessment activities
- The data generated during the VI assessment activities described will be utilized to design and install a SSDS capable of mitigating the exposure of the identified contaminant vapors in the indoor air of the Site building.
- Once designed and installed, a pilot test will be conducted to confirm proper operation of the SSDS that will include sampling of the exhaust to evaluate the need for filtration. If needed, exhaust filtration will be installed.
- Bi-annual monitoring and reporting will be performed to confirm that operation of the SSDS is mitigating the exposure to contaminant concentrations above Non-Residential Indoor Air SHS VI Screening Values.
- In an attempt to reduce the concentrations of contaminants in the indoor air of the Site building, VaporRemed will be applied to the sub slab vadose zone.
- The final SSDS specifications, a site plan(s) depicting the construction of the SSDS, the documentation of confirmation monitoring, and a draft of the environmental covenant will be submitted in a report to the PADEP for review/approval. Once the environmental covenant is approved, it will be recorded on the deed for the Subject Property. The environmental covenant must be maintained until such time that sampling data can be obtained demonstrating that the VI pathway does not pose any significant risk without operation of any mitigation system.

PART VI

REFERENCES

Commonwealth of Pennsylvania, Pennsylvania Code Title 25. Environmental Protection, Chapter 250 Administration of Land Recycling Program, Pennsylvania Department of Environmental Protection.

Nachlas, Paul E., P.G., April 29, 2016, Combined Remedial Investigation Report & Final Report Plaza 2331 Commercial property eFACTS #62810, Independence Environmental Consulting, LLC.

Pennsylvania Department of Environmental Protection, Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under Act, January 18, 2017, Bureau of Environmental Cleanup and Brownfields.

International Radon Symposium Proceedings, 2002. Designing Commercial Sub-Slab Depressurization Systems.

TABLES

- Table 1 Summary of Groundwater Analytical Data
Table 2 Summary of Soil Analytical Data
Table 3 Summary of Soil Gas and Indoor Air Analytical Data

Table 1 - Summary of Groundwater Analytical Data
 Plaza 2331 Property
 2331 East Market St. York County, PA

GTA-10									
Analyte	Units	6/19/2013	11/13/2013	12/4/2014	3/13/2015	5/22/2015	8/28/2015	12/30/2015	PADEP Act 2 MSC _{GW-asd}
VOCs									
Chloroethane	µg/L	n/a	n/a	---	---	---	---	---	900
1,2-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,3-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,1-Dichloroethene	µg/L	n/a	n/a	1.9	---	---	1.1	---	7
cis-1,2-Dichloroethene	µg/L	n/a	n/a	161	346	414	347	320	70
trans-1,2-Dichloroethene	µg/L	n/a	n/a	---	---	---	---	---	100
Trichloroethene	µg/L	n/a	n/a	119	19.1	---	---	120	5
Tetrachloroethene	µg/L	n/a	n/a	73.9	12.4	---	---	90.5	5
Methyl t-Butyl Ether	µg/L	n/a	n/a	2.6	---	---	---	---	20
Vinyl Chloride	µg/L	n/a	n/a	40.8	8.6	10.5	16.6	41.1	2
Other VOCs	µg/L	n/a	n/a	---	---	---	---	---	Varies

GTA-11									
Analyte	Units	6/19/2013	11/13/2013	12/4/2014	3/13/2015	5/22/2015	8/28/2015	12/30/2015	PADEP Act 2 MSC _{GW-asd}
VOCs									
Chloroethane	µg/L	n/a	n/a	---	---	---	---	---	900
1,2-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,3-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,1-Dichloroethene	µg/L	n/a	n/a	---	---	---	---	---	7
cis-1,2-Dichloroethene	µg/L	n/a	n/a	187	196	669	425	635	70
trans-1,2-Dichloroethene	µg/L	n/a	n/a	---	---	---	5.6	4.0	100
Trichloroethene	µg/L	n/a	n/a	80.2	94.5	23.3	155	25.8	5
Tetrachloroethene	µg/L	n/a	n/a	494	1110	53.9	1930	295	5
Methyl t-Butyl Ether	µg/L	n/a	n/a	---	---	---	---	---	20
Vinyl Chloride	µg/L	n/a	n/a	2.5	---	---	4.5	20.5	2
Other VOCs	µg/L	n/a	n/a	---	---	---	---	---	Varies

GTA-12									
Analyte	Units	6/19/2013	11/13/2013	12/4/2014	3/13/2015	5/22/2015	8/28/2015	12/30/2015	PADEP Act 2 MSC _{GW-asd}
VOCs									
Chloroethane	µg/L	n/a	n/a	1	---	---	1.9	---	900
1,2-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,3-Dichlorobenzene	µg/L	n/a	n/a	---	---	---	---	---	600
1,1-Dichloroethene	µg/L	n/a	n/a	---	---	---	---	---	7
cis-1,2-Dichloroethene	µg/L	n/a	n/a	181	95.2	217	261	282	70
trans-1,2-Dichloroethene	µg/L	n/a	n/a	2.3	---	---	1.5	9.9	100
Trichloroethene	µg/L	n/a	n/a	---	58.8	138	165	182	5
Tetrachloroethene	µg/L	n/a	n/a	625	299	603	478	870	5
Methyl t-Butyl Ether	µg/L	n/a	n/a	---	---	---	---	---	20
Vinyl Chloride	µg/L	n/a	n/a	1.1	---	---	13.6	11.1	2
Other VOCs	µg/L	n/a	n/a	---	---	---	---	---	Varies

Table 1 - Summary of Groundwater Analytical Data
 Plaza 2331 Property
 2331 East Market St. York County, PA

Table 1 - Summary of Groundwater Analytical Data
 Plaza 2331 Property
 2331 East Market St. York County, PA

ARM-9									
Analyte	Units	6/19/2013	11/13/2013	12/4/2014	3/13/2015	5/22/2015	8/28/2015	12/30/2015	PADEP Act 2 MSCGW-used
VOCs									
Chloroethane	µg/L	---	---	---	---	---	---	---	900
1,2-Dichlorobenzene	µg/L	---	---	1.7	---	---	---	---	600
1,3-Dichlorobenzene	µg/L	---	---	1.2	---	---	---	---	600
1,1-Dichloroethene	µg/L	---	---	---	---	---	---	---	7
cis-1,2-Dichloroethene	µg/L	---	7.2	---	3.7	---	2.0	---	70
trans-1,2-Dichloroethene	µg/L	---	---	---	---	---	---	---	100
Trichloroethene	µg/L	---	4.9	1.3	1.1	---	2.0	---	5
Tetrachloroethene	µg/L	10.1	57	25.4	10.1	13.3	22.6	16	5
Methyl t-Butyl Ether	µg/L	n/a	---	---	---	---	---	---	20
Vinyl Chloride	µg/L	---	---	---	---	---	---	---	2
Other VOCs	µg/L	---	---	---	---	---	---	---	Varies

Notes:

µg/L = micrograms per liter

n/a = Not analyzed

--- = Not detected at or above the laboratory's reporting limit

2013 Analytical Data provided by an undated summary table titled "Summary of Groundwater Sample Analytical Results" by ARM Group, Inc.

PADEP Act 2 MSCGW-used = Pennsylvania Department of Environmental Protection Act 2 Medium-Specific Concentration for groundwater in used non-residential aquifers.

Table 2
Summary of Soil Analytical Data
 Plaza 2331 Site
 2331 East Market Street
 Springettsbury Township, York County, Pennsylvania

			Target Compounds	Trichloroethylene (TCE)	Tetrachloroethylene (PCE)	cis 1,2-Dichloroethylene	trans 1,2-Dichloroethylene	1,1-Dichloroethylene	Vinyl Chloride
			Non-Residential Soil-to-Groundwater MSCs ¹	0.5	0.5	7	10	0.7	0.2
			Non-Residential Direct Contact 0-2 Feet MSCs ²	160	3,200	6,400	4,800	10,000	61
			Non-Residential Direct Contact 2-15 Feet MSCs ³	180	3,600	10,000	5,500	10,000	280
Sample Identification	PID Reading (ppm)	Depth (ft. bgs)	Date Collected						
SB-5	27*	8.0	8/9/2011	ND (0.0032)	0.0033	ND (0.0032)	ND (0.0032)	ND (0.0032)	ND (0.0032)
SB-6	0*	6.5	8/9/2011	ND (0.0052)	ND (0.0052)	ND (0.0052)	ND (0.0052)	ND (0.0052)	ND (0.0052)
SB-7	0*	4.5	8/9/2011	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)
SB-8	8*	4.5	8/9/2011	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)
SB-11	1*	5.1	8/9/2011	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)
SB-12	2*	12.0	8/9/2011	0.170	na	0.360	ND (0.0051)	ND (0.0051)	ND (0.0051)
SB-13	75*	7.0	8/9/2011	0.0048	0.026	0.270	ND (0.0040)	ND (0.0040)	ND (0.0040)
SB-13	15*	13.0	8/9/2011	0.022	0.220	0.088	ND (0.0041)	ND (0.0041)	ND (0.0041)
SB-14	1*	9.5	8/9/2011	ND (0.0058)	ND (0.0058)	ND (0.0058)	ND (0.0058)	ND (0.0058)	ND (0.0058)
SB-15	0*	6.7	8/9/2011	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)
SB-17		3.0		0.0282	1.49	0.0863	0.000497	ND (0.000406)	ND (0.000390)
SB-18		4.0		0.00298	0.00472	0.0642	0.0041	ND (0.000363)	0.00123
SB-19		2.0		0.00457	0.0417	0.00144	ND (0.000317)	ND (0.000364)	ND (0.000369)
SB-20		2.0		0.822	30.2	0.999	0.00973	0.000591	0.00234
SB-21		3.0		ND (0.172)	0.955	3.58	ND (0.163)	0.123	ND (0.179)
SB-121	39.0	3.0	6/28/2017	7.4	2,680	3.7	ND (<0.27)	ND (<0.27)	ND (<0.27)
SB-221A	369	3.0	9/11/2017	0.15	0.073	83.9	2.8	0.17	10.7
SB-221B	471	3.0	9/11/2017	ND (<2.3)	44,200	ND (<2.3)	ND (<2.3)	ND (<2.3)	ND (<2.3)
SB-221A	81.0	5.0	9/11/2017	0.14	ND (<0.23)	14.5	0.33	0.0074	6.0
SB-221A	90.0	7.0	9/11/2017	0.79	2.5	11.3	0.14	ND (<0.0045)	0.31
SB-21		10.0			1.3	6.03	10.5	0.0799	0.00361
SB-121	17.8	10.0	6/28/2017	1.6	6.4	7.4	0.056	ND (<0.0056)	0.043
SB-221A	70.0	10.0	9/11/2017	1.1	13.1	10.6	0.13	ND (<0.0045)	0.16
SB-22		5.0		ND (0.0746)	0.0763	2.61	0.132	0.00139	2.98
SB-122	10.3	5.0	6/28/2017	0.62	17.6	57.0	0.68	ND (<0.29)	0.88
SB-222A	126	5.0	9/11/2017	14.7	135	17.9	0.15	ND (<0.0046)	0.66
SB-22		10.0		0.561	2.95	3.29	0.0261	0.000695	ND (0.0749)
SB-122	80.9	10.0	6/28/2017	0.81	5.6	5.0	0.068	ND (<0.0054)	ND (<0.0054)
SB-23		7.0		0.621	4.32	1.55	0.00872	ND (0.000384)	ND (0.0299)
SB-123	9.4	7.0	6/28/2017	0.15	2.6	5.5	0.015	ND (<0.0050)	0.028
SB-223A	60.0	3.0	9/11/2017	0.032	0.14	32.5	0.25	0.018	6.0
SB-223A	12.0	5.0	9/11/2017	ND (<0.0048)	0.045	0.12	0.017	ND (<0.0048)	1.7
SB-223A	15.0	7.0	9/11/2017	0.27	1.4	2.0	0.017	ND (<0.0045)	0.26
SB-24		3.0		0.0868	0.308	0.00937	0.000958	ND (0.000384)	ND (0.00728)
SB-24		8.0		0.121	1.08	0.395	0.0029	ND (0.000386)	ND (0.000371)
SB-124	4.0	8.0	6/28/2017	2.9	21.0	2.3	0.019	ND (<0.0050)	0.077
SB-25		5.0		0.00786	0.00605	0.066	0.000374	ND (0.00037)	ND (0.000355)
SB-26		3.0		0.002	0.00373	17.9	0.12	0.00572	0.598
SB-126	1.0	3.0	6/28/2017	ND (<0.0049)	ND (<0.0049)	0.053	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
SB-27		3.0		0.0027	0.00813	0.155	0.0303	0.00123	0.0362
SB-27		9.0		0.0939	0.729	0.375	0.0044	ND (0.00037)	ND (0.00719)
SB-127	0.8	9.0	6/28/2017	0.026	0.071	0.072	ND (<0.0060)	ND (<0.0060)	ND (<0.0060)
SB-28		5.0		0.0409	0.0905	0.299	0.0139	0.000511	0.00644
SB-29		3.0		0.00787	0.031	0.0128	ND (0.00033)	ND (0.000379)	ND (0.000364)
SB-30		3.0		0.00155	0.00169	0.0366	0.00301	ND (0.000366)	0.00153
SB-31		3.0		0.00122	0.000964	0.122	0.0128	ND (0.000367)	0.0179
SB-33		3.0		0.00158	0.00342	0.00797	0.000741	ND (0.000378)	0.0445
SB-33		8.0		0.137	1.24	0.879	0.0029	0.000655	0.0028
SB-133	0.4	8.0	6/28/2017	0.030	0.12	0.062	ND (<0.0054)	ND (<0.0054)	0.015
SB-34		3.0		0.00616	0.00259	0.00252	0.0021	ND (0.000375)	0.0352
SB-34		8.0		0.104	0.544	0.174	0.000668	ND (0.00037)	ND (0.000355)
SB-134	0.4	8.0	6/28/2017	0.026	0.11	0.14	ND (<0.0050)	ND (<0.0050)	ND (<0.0050)
SB-35		3.0		0.00685	0.00273	0.00664	0.0025	ND (0.00038)	0.0381
SB-35		8.0		0.0356	0.291	0.0763	0.000494	ND (0.00039)	ND (0.000375)
SB-36		2.0		ND (0.000337)	0.00398	ND (0.000284)	ND (0.000319)	ND (0.000367)	ND (0.000352)
EPS-336	350	5.0	11/22/2017	8.8	27.8	30.7	0.32	0.057	2.6
EPS-336	62	9.5	11/22/2017	2.2	19.8	6.3	0.068	0.0064	0.29
EPS-336	14.5	15.0	11/22/2017	0.57	7.5	0.97	0.012	ND (<0.0040)	0.015
EPS-337	9,999+	5.0	11/22/2017	279	12,100	42.8	ND (<2.4)	ND (<2.4)	ND (<2.4)
EPS-337	565	1							



Table 3
Summary of Soil Gas and Indoor Air Analytical Data
 Plaza 2331 Site
 2331 East Market Street
 Springettsbury Township, York County, Pennsylvania

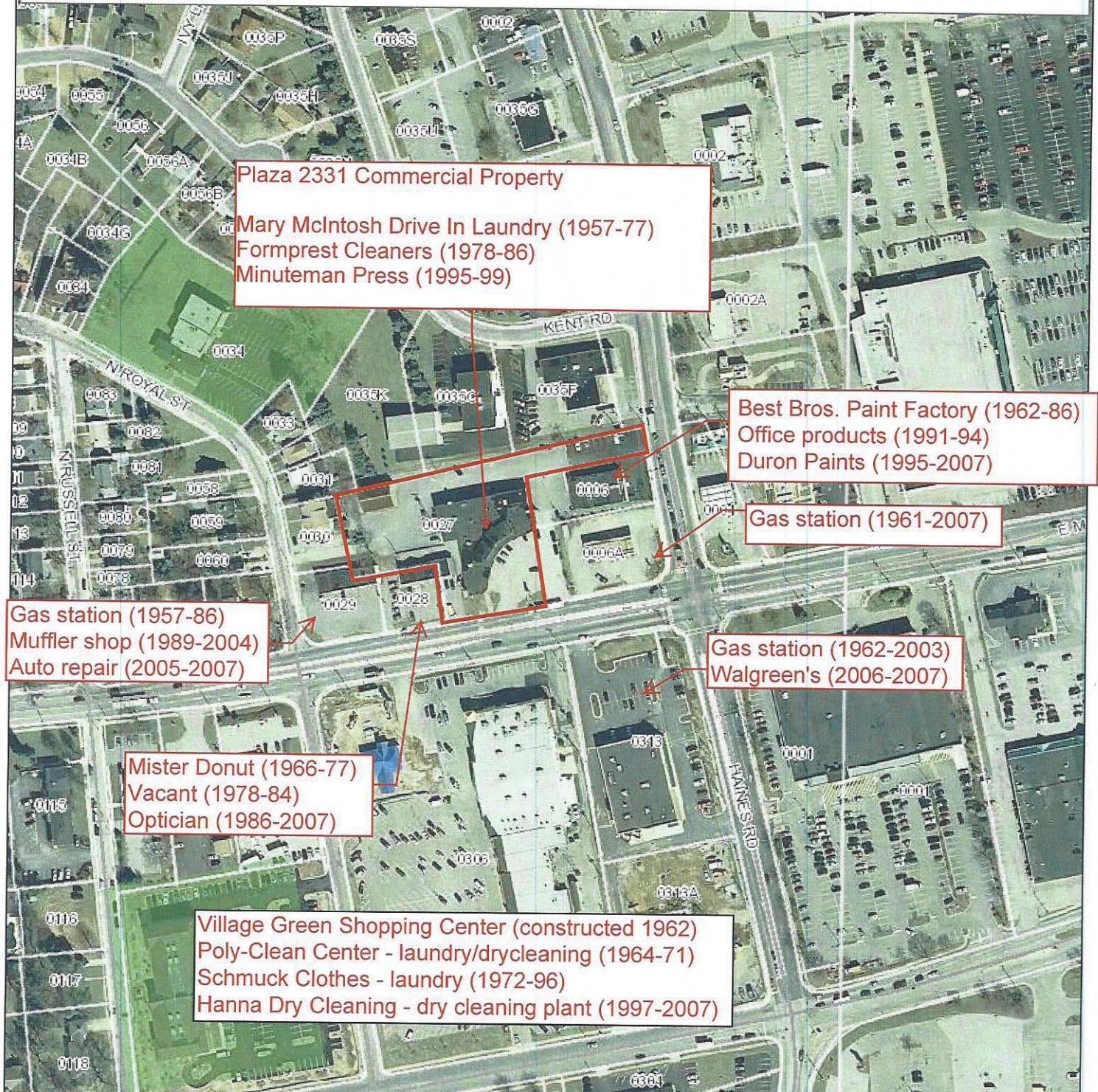
		Target Compounds	Acetone	Benzene	2-Butanone (MEK)	Carbon Disulfide	cis 1,2-Dichloroethylene	trans 1,2-Dichloroethylene	1,1-Dichloroethylene	Dichlorodifluoromethane	Ethylbenzene	4-Ethyltoluene	Hexane	Isooctane	Methylene Chloride	n-Hexane	1,1,1-Trichloroethane	Toluene	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes (total)
Residential Near-Source Soil Gas ¹		6,500,000	620	1,000,000	150,000	NS	13,000	42,000	21,000	1,900	NS	150,000	NS	2,700	NS	1,000,000	1,000,000	8,300	420	1,500	1,500	160	21,000	
Non-Residential Near-Source Soil Gas ²		140,000,000	16,000	22,000,000	3,100,000	NS	260,000	880,000	440,000	49,000	NS	3,100,000	NS	68,000	NS	22,000,000	22,000,000	180,000	8,800	31,000	31,000	14,000	440,000	
Non-Residential Sub-Slab Soil Gas ³		17,000,000	2,000	2,800,000	390,000	34,000	34,000	110,000	56,000	6,300	NS	390,000	NS	8,700	NS	2,800,000	2,800,000	22,000	1,100	3,900	3,900	1,700	56,000	
Non-Residential Indoor Air ⁴		140,000	16	13,000	3,100	260	260	880	440	49	NS	3,100	NS	68	NS	22,000	22,000	180	8.8	31	31	14	440	
Sample Identification	Media	Date Collected																						
Soil Gas 221	Soil Gas	12/6/2018	14.2	1.4	ND (<5.1)	3.1	48.2	ND (<1.4)	ND (<1.4)	2.1	ND (<1.5)	ND (<4.3)	NA	NA	23.9	4.7	ND (<1.9)	4.0	1,440	24.1	2.5	ND (<1.7)	ND (<0.44)	3.7
Soil Gas ARM-7	Soil Gas	12/6/2018	26.5	2.6	9.2	2.6	ND (<1.5)	ND (<1.5)	ND (<1.5)	1.9	ND (<1.6)	ND (<4.6)	NA	NA	28.0	11.7	ND (<2.0)	6.3	36.1	ND (<1.0)	2.6	ND (<1.8)	ND (<0.48)	4.6
VP-1	Soil Gas	1/29/2016	13	1.9	8.0	6.6	3.4	3.6	ND (<0.8)	1.5	1.5	ND (<1.0)	23	9.4	9.7	NA	1.5	30	22	28	1.2	ND (<1.0)	ND (<0.5)	8.0
	Soil Gas	3/4/2016	25	1.1	2.4	ND (<1.6)	74.0	0.89	ND (<0.79)	3.8	1.8	ND (<0.98)	0.8	ND (<0.93)	ND (<0.69)	NA	ND (<1.1)	1.6	310	29	ND (<0.98)	ND (<0.98)	ND (<0.51)	7.2
VP-2	Soil Gas	1/29/2016	12	1.9	1.8	ND (<0.6)	4.2	ND (<0.8)	ND (<0.8)	1.6	2.6	1.1	3.0	1.4	1.9	NA	ND (<1.0)	16	16	5.9	4.4	ND (<1.0)	ND (<0.5)	17.2
	Soil Gas	3/4/2016	28	1.1	9.5	ND (<1.6)	7.8	ND (<0.79)	ND (<0.79)	3.7	4.6	1.2	1.0	4.6	ND (<0.69)	NA	ND (<1.1)	4.4	5.3	1.6	2.0	1.0	ND (<0.51)	21.1
VP-3	Sub-Slab	1/29/2016	14	7.8	1.9	ND (<0.6)	510	2.7	ND (<0.8)	1.5	11	2.1	5.4	4.5	3.4	NA	ND (<1)	94	510	110	8.4	2.4	ND (<0.5)	62
	Ambient Air	1/29/2016	6.6	0.64	ND (<0.6)	ND (<0.6)	2.8	ND (0.8)	ND (<0.8)	1.6	ND (<0.9)	ND (<1)	0.83	ND (<0.9)	1.8	NA	ND (<1)	0.83	120	4.1	ND (<1.0)	ND (<1.0)	ND (<0.5)	ND (<2)
	Sub-Slab	3/4/2016	15	ND (<6.4)	ND (<15)	ND (<16)	32,000	240	32	ND (<9.9)	ND (<8.7)	ND (<9.8)	ND (<7.0)	ND (<9.3)	ND (<6.9)	NA	ND (<11)	ND (<7.5)	110,000	7,300	ND (<9.8)	ND (<9.8)	44	ND (<9.8)
	Ambient Air	3/4/2016	29	1.0	2.9	ND (<1.6)	57	ND (0.79)	ND (<0.79)	6.8	3.1	ND (<0.98)	0.77	ND (<0.93)	1.2	NA	ND (<1.1)	1.7	260	23	ND (<0.98)	ND (<0.98)	ND (<0.51)	12.2
	Sub-Slab	2/21/2018	77.1	4.5	ND (<5.0)	ND (<1.1)	23,300	175	12.4	ND (<1.7)	ND (<1.5)	2.1	NA	2.3	205	14.6	2.3	6.9	107,000	7,710	2.8	ND (<1.7)	143	6.3
	Sub-Slab	4/6/2018	ND (<4.0)	0.85	5.6	ND (<1.1)	1,990	16.5	ND (<1.4)	2.2	ND (<1.5)	8.3	NA	ND (<1.9)	ND (<5.9)	8.3	ND (<1.9)	2.4	587	326	ND (<1.7)	ND (<1.7)	ND (<0.44)	ND (<3.0)
	Sub-Slab	5/17/2018	ND (<135)	ND (<18.2)	ND (<168)	ND (<35.5)	92,700	259	ND (<45.2)	ND (<56.7)	ND (<49.5)	ND (<56.0)	NA	NA	ND (<198)	ND (<40.2)	ND (<62.3)	ND (<43.0)	103,000	9,750	ND (<56.0)	ND (<56.0)	159	ND (<7.8)
	Sub-Slab	6/21/2018	ND (<4.3)	76.5	ND (<5.4)	96.8	434,000	1,880	132,000	2.6	1.7	ND (<1.8)	NA	NA	65.6	1,830	9.1	9.3	32,000	15,500	ND (<1.8)	ND (<1.8)	11,300	ND (<4.8)
	Sub-Slab	7/25/2018	ND (<4.4)	16.5	43.8	36.4	86,900	3,060	96.5	2.5	2.6	ND (<1.8)	NA	NA	15.7	114	9.3	4.4	55,600	21,900	ND (<4.6)	ND (<1.8)	3,440	5.6
	Sub-Slab	8/28/2018	502	15.2	504	60.4	147,000	362	113.0	ND (<3.2)	ND (<7.9)	NA	NA	41.0	817	4.1	9.4	15,500	11,500	3.4	ND (<3.2)	29,100	ND (<2.8)	
EPS-1	Sub-Slab	2/21/2018	ND (<4.3)	2.5	18.4	5.9	350	4.3	ND (<1.4)	ND (<1.8)	ND (<1.6)	ND (<2.0)	NA	ND (<2.0)	11.4	71.5	ND (<2.0)	5.0	876	107	2.5	ND (<1.8)	ND (<0.46)	5.0
	Sub-Slab	5/17/2018	35.7	2.6	ND (<8.8)	ND (<1.8)	239	ND (2.4)	ND (<2.4)	ND (<2.9)	ND (<2.6)	ND (<2.9)	NA	NA	18.4	55.4	ND (<3.2)	3.9	412	84.6	ND (<2.9)	ND (<2.9)	ND (<0.76)	ND (<7.8)
	Sub-Slab	8/28/2018	352	7.9	38.8	14.6	345	6.5	ND (<4.6)	ND (<5.8)	ND (<5.0)	ND (<14.2)	NA	NA	325	63.7	ND (<6.3)	16.5	585	833	6.6	ND (<5.7)	61.3	ND (<5.0)
IA-Basement-01 (e.g., IA-001)	Indoor Air	4/6/2018	24.3	ND (<2.2)	ND (<20.3)	ND (<4.3)	12.5	ND (5.4)	ND (<5.4)	ND (<6.8)	ND (<6.0)	ND (<6.8)	NA	ND (<7.5)	ND (<23.9)	ND (<4.8)	ND (<7.5)	ND (<5.2)	121	7.8	ND (<6.8)	ND (<6.8)	ND (<1.8)	ND (<12.0)
	Indoor Air	5/17/2018	35.6	0.85	4.6	ND (<0.94)	61.8	ND (1.2)	ND (<1.2)	2.2	ND (<1.3)	ND (<1.5)	NA	NA	ND (<5.3)	ND (<1.1)	ND (<1.7)	6.1	288	21.0	ND (<1.5)	ND (<1.5)	ND (<0.39)	ND (<3.9)
	Indoor Air	6/5/2018*	43.6	0.71	6.6	ND (<0.94)	98.4	ND (1.2)	ND (<1.2)	2.9	ND (<1.3)	ND (<1.5)	NA	NA	22.2	2.0	1.7	6.7	338	26.8	ND (<1.5)	ND (<1.5)	3.1	ND (<2.6)
	Indoor Air	6/21/2018	115.0	1.0	7.6	ND (<0.91)	222	1.8	ND (<1.2)	3.0	ND (<1.3)	ND (<1.4)	NA	NA	8.1	2.7	3.4	9.8	719	97.8	ND (<1.4)	ND (<1.4)	4.	

FIGURES

- Figure 1 Subject Property Location and Boundaries Plan
- Figure 2 Subject Property Features Plan
- Figure 3 Site Building Layout and Sample Location Plan
- Figure 4 Proposed IAQ Sampling Location Plan
- Figure 5 Proposed Soil Gas Sampling Location Plan

Figure 1 - Subject Property Location and Boundaries Plan

Plaza 2331
City Directory Summary (1948 - 2007 directories)



York
County
Assessment
Office

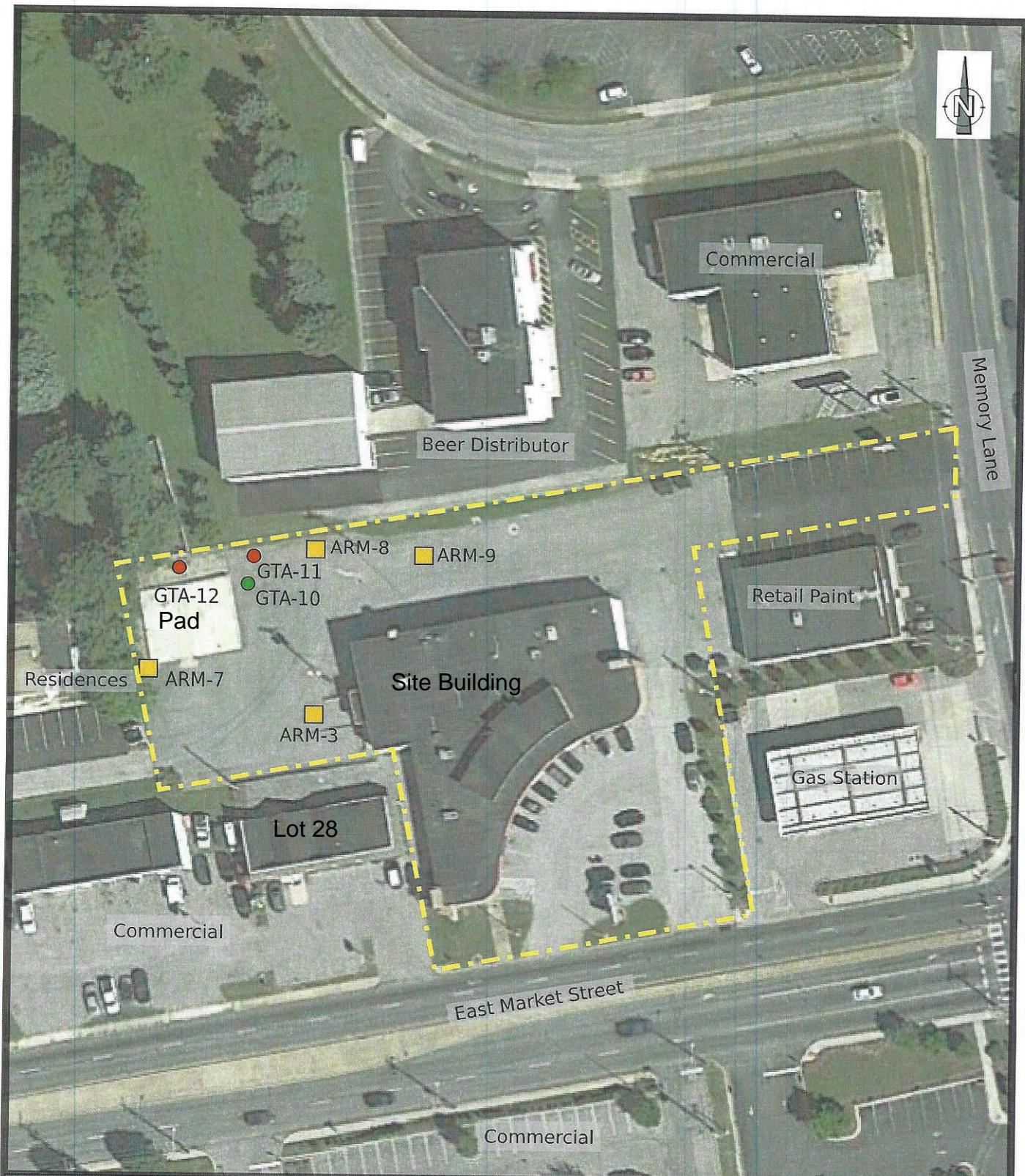


- Road
- Municipalities
- 100 yr Floodplain
- (----- Easements)
- N
- Rail
- Parcels
- () Soils

Maps are not from actual survey

06/18/2014
Scale 1:2400

Figure 2 Subject Property Features Plan



Plaza 2331 Commercial Property
2331 East Market Street
City of York, PA

- GTA SHALLOW WELL LOCATION & ID
- GTA DEEP WELL LOCATION & ID
- ARM WELL LOCATION AND ID

FIG. 2 SITE LAYOUT &
WELL LOCATION MAP

**Independence
Environmental
Consulting, LLC**



www.IndependenceEnv.com

PROJECT No.
0126.001.16

DATE
APRIL 29, 2016

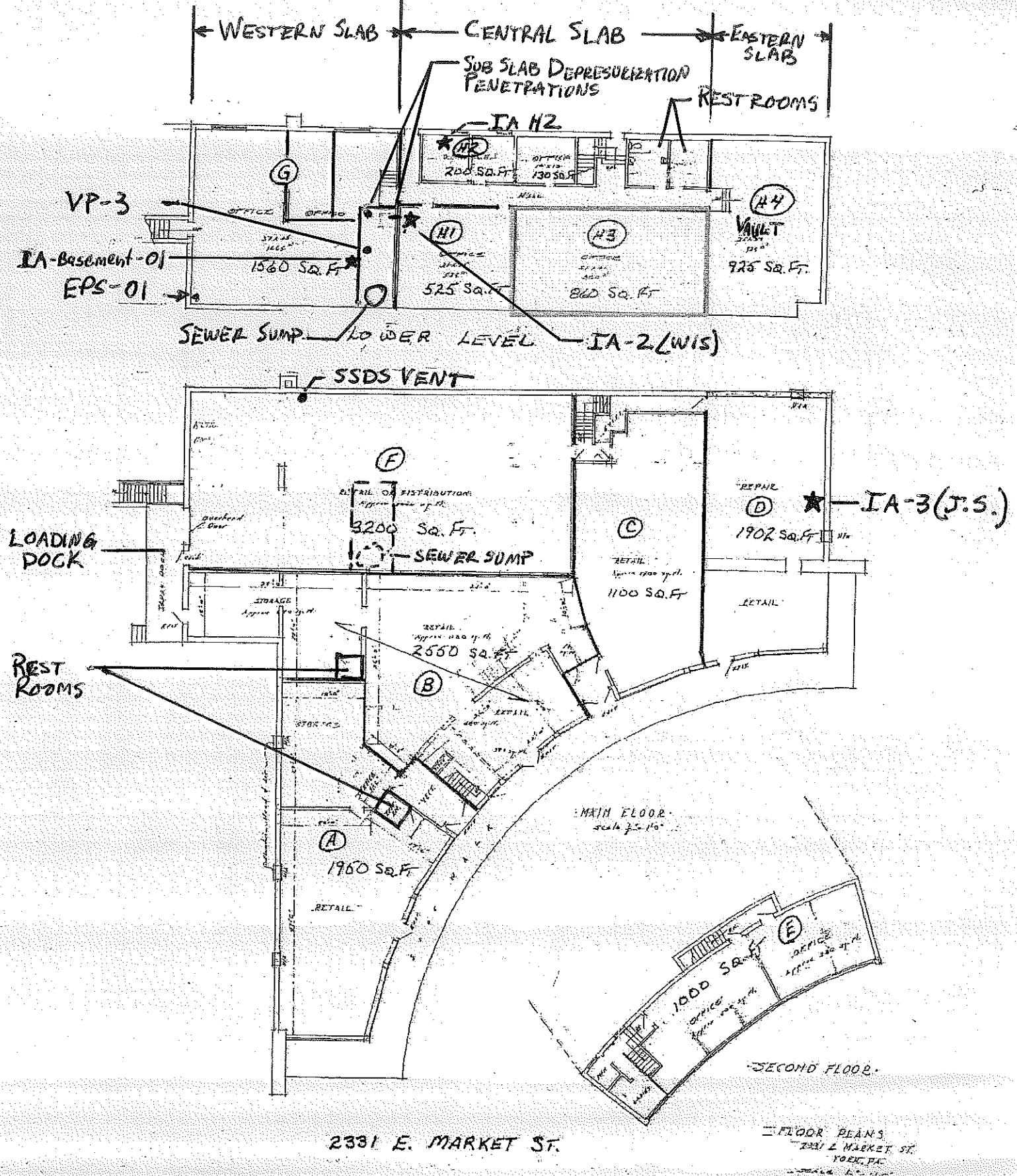


Figure 3 Site Building Layout and Sample Location Plan

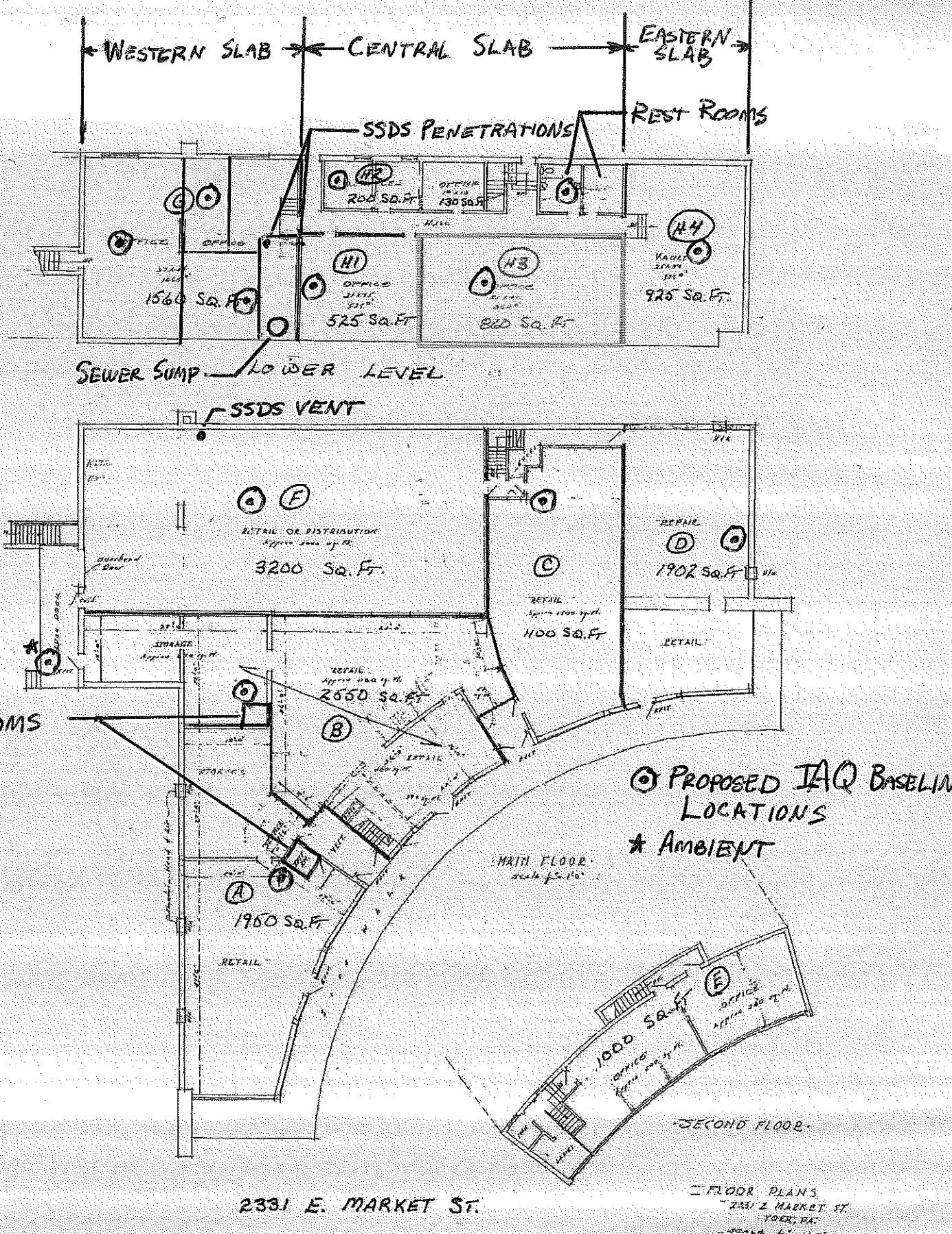


Figure 4 Proposed IAQ Sampling Location Plan

Figure 5 Proposed Soil Gas Sampling Location Plan



May 16, 2017

① PROPOSED SOIL GAS LOCATIONS

1:1,128

- Land Join
 - County PA_MD Boundary
 - Roads**
 - US Route
 - Local Road
 - PA Turnpike
 - Interstate
 - State Road
 - Tax_Parcel

Parcel Updated: 04/27/17
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Appendices

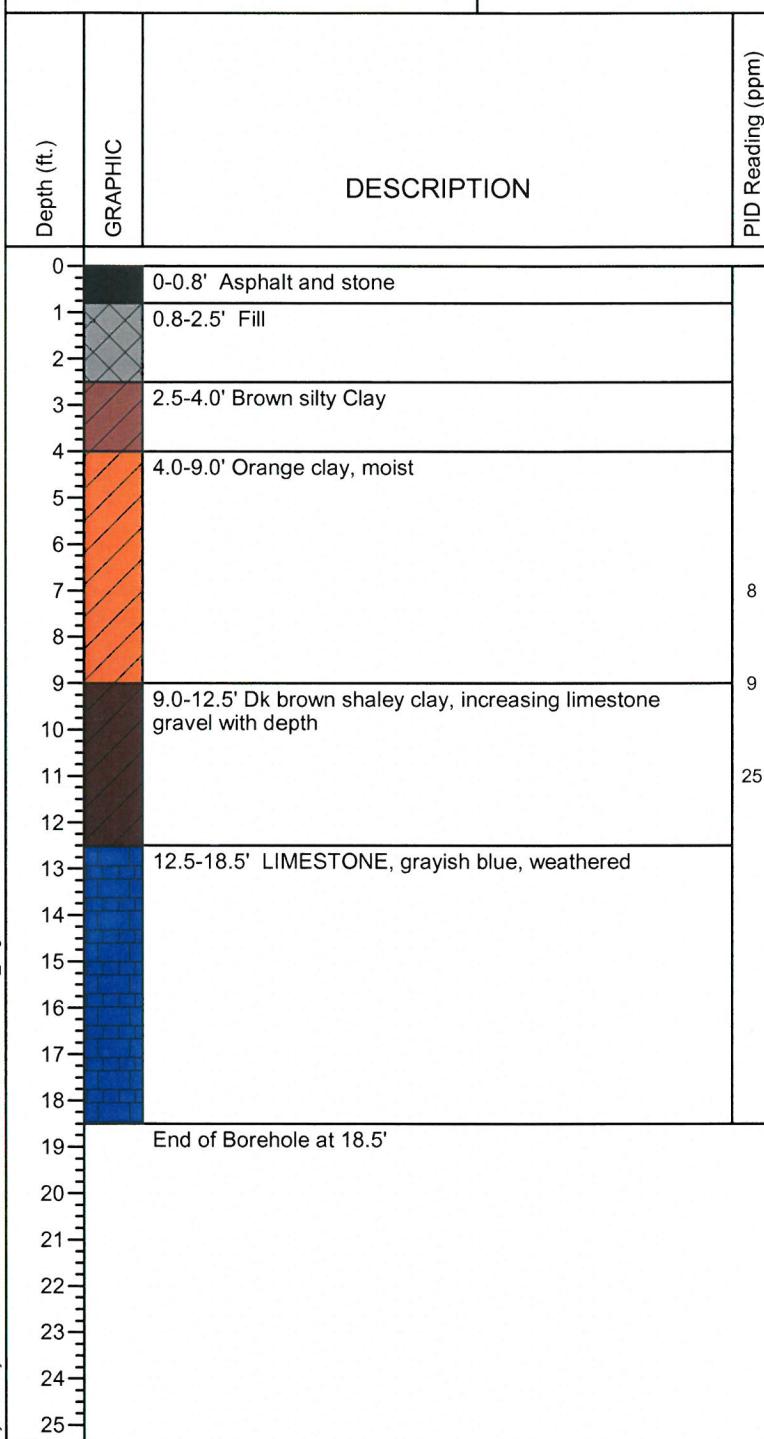
Appendix A Well Logs



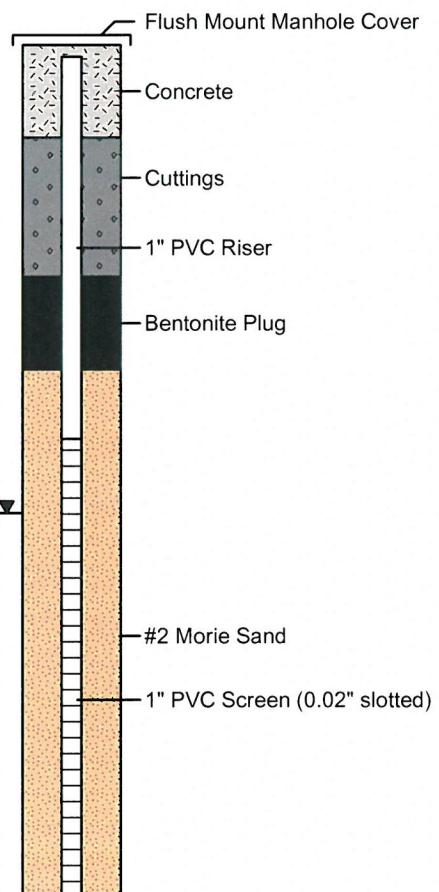
ARM Group Inc.
Earth Resource Engineers
and Consultants

Monitoring Well ARM-3

Client	: ROCK Real Estate	Drilling Method	: HSA and Rock Coring
ARM Project	: 11411	Date Started	: 10/20/11
Site Location	: 2331 East Market Street	Date Completed	:
	: York, PA	Weather	: 50s, overcast
ARM Representative	: B. Sick	Latitude	:
Drilling Company	: Main Line	Longitude	:
Driller	: Chris	Screen Interval	: 8.5-18.5' bgs
Driller's Helper	: Randy	DTW (2 hrs)	: 10.1' bgs



Well Diagram : ARM-3

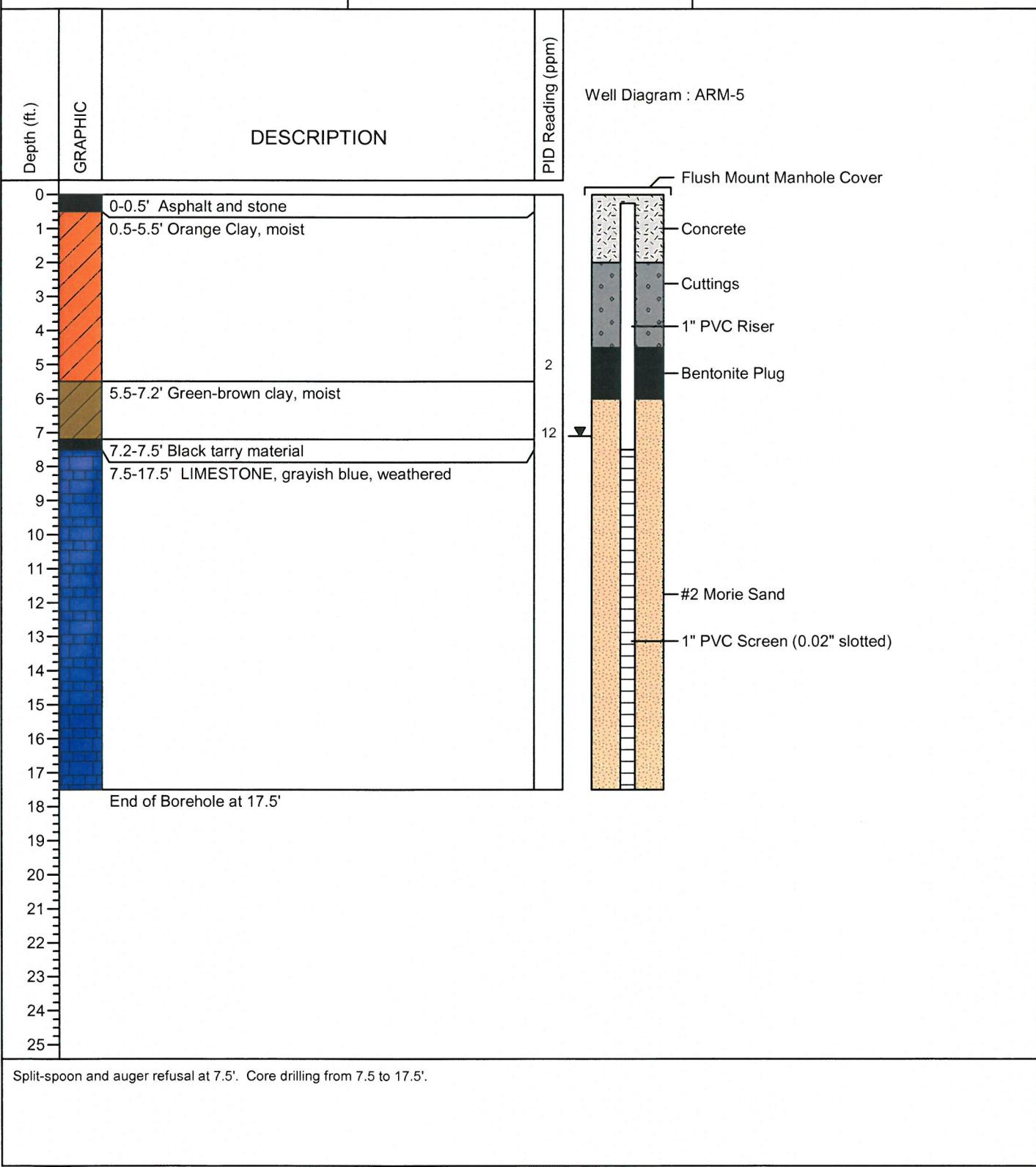




ARM Group Inc.
Earth Resource Engineers
and Consultants

Monitoring Well ARM-5

Client	: ROCK Real Estate	Drilling Method	: HSA and Rock Coring
ARM Project	: 11411	Date Started	: 10/20/11
Site Location	: 2331 East Market Street	Date Completed	:
	: York, PA	Weather	: 50s, overcast
ARM Representative	: B. Sick	Latitude	:
Drilling Company	: Main Line	Longitude	:
Driller	: Chris	Screen Interval	: 7.5-17.5' bgs
Driller's Helper	: Randy	DTW (2 hrs)	: 7.1' bgs

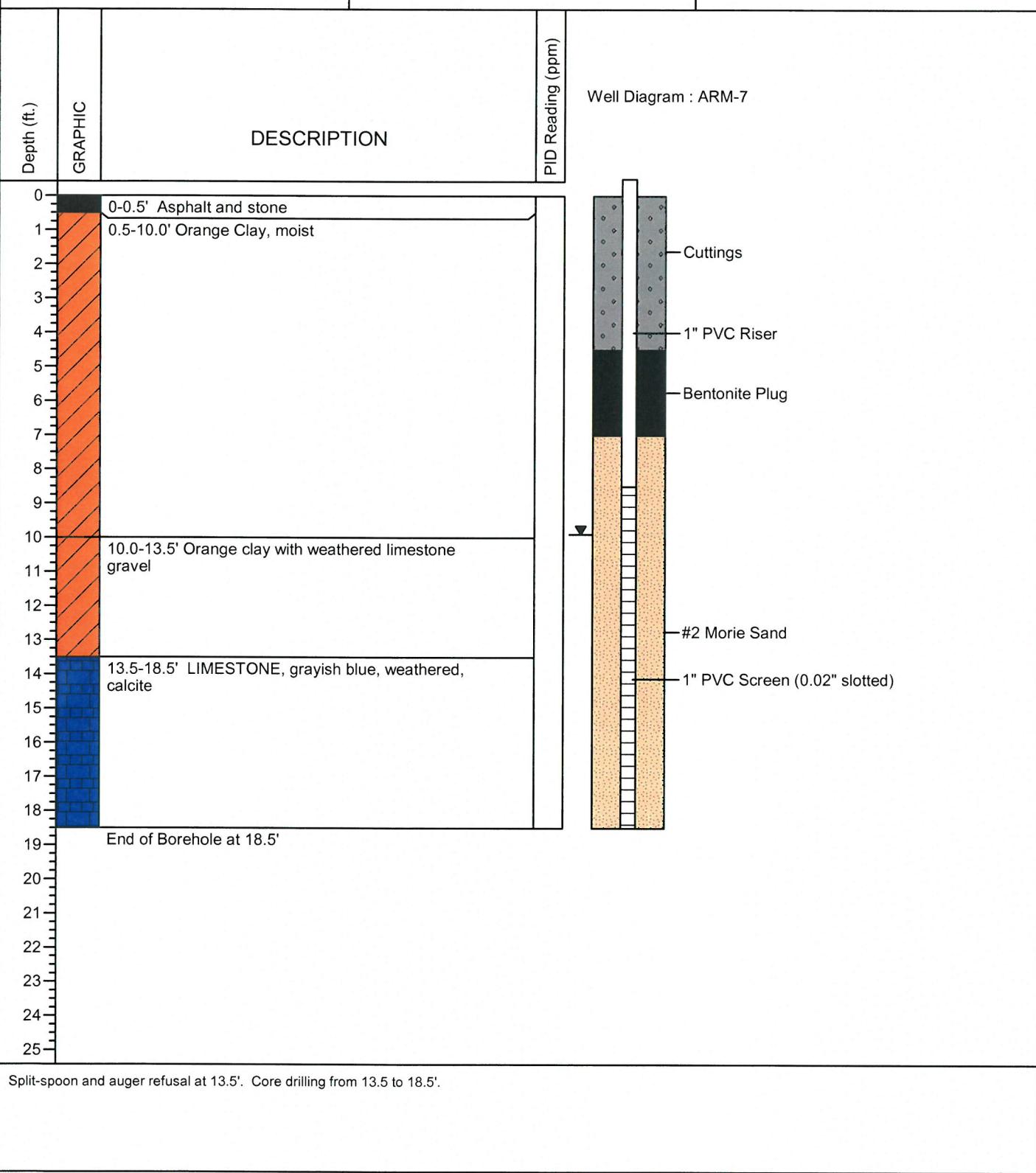




ARM Group Inc.
Earth Resource Engineers
and Consultants

Monitoring Well ARM-7

Client	: ROCK Real Estate	Drilling Method	: HSA and Rock Coring
ARM Project	: 11411	Date Started	: 2/6/12
Site Location	: 2331 East Market Street	Date Completed	:
ARM Representative	: York, PA	Weather	: 30s, overcast
Drilling Company	: B. Sick	Latitude	:
Driller	: Main Line	Longitude	:
Driller's Helper	: Joe	Screen Interval	: 8.5-18.5' bgs
	: Randy	DTW (2 hrs)	: 9.9' bgs

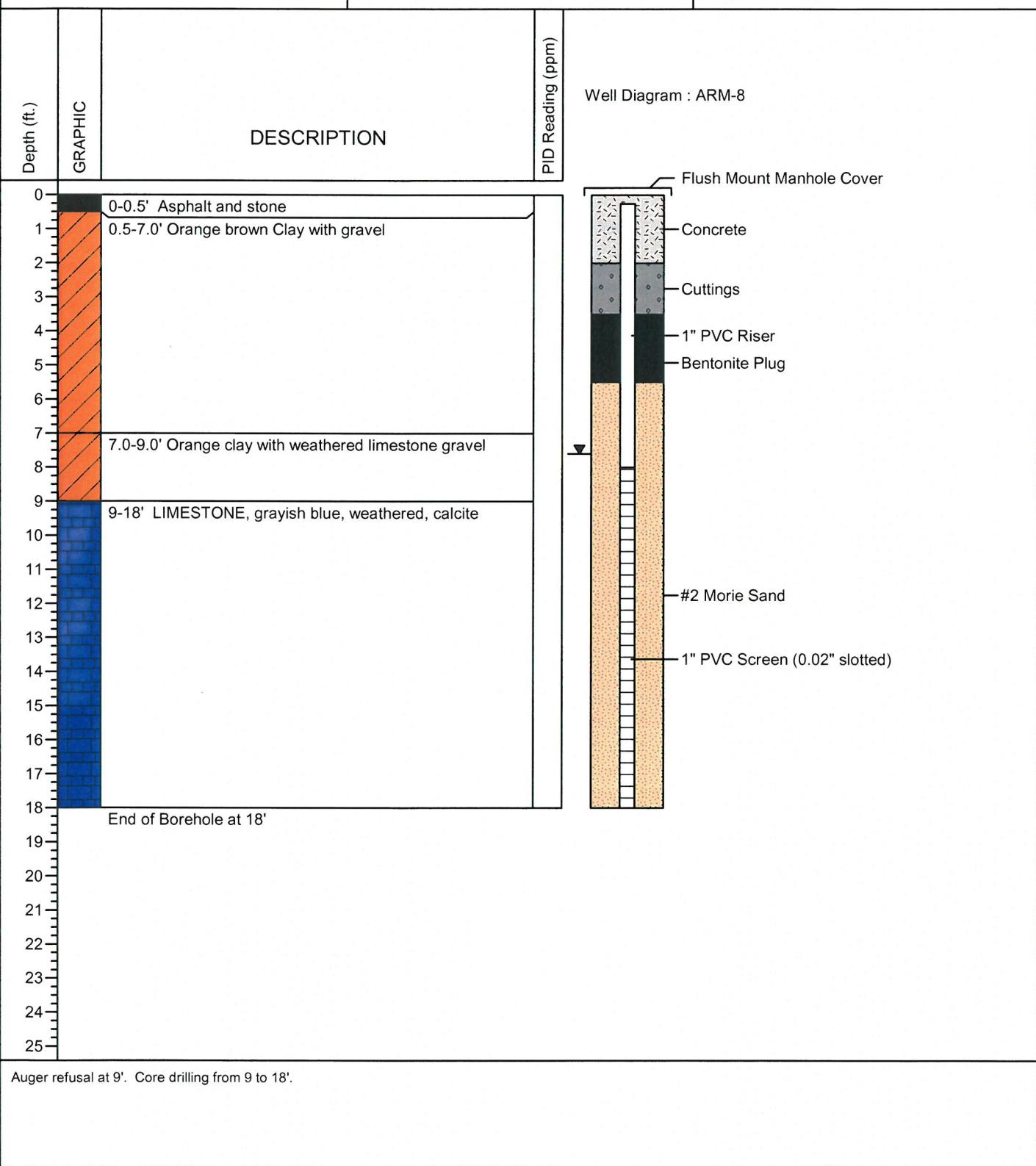




ARM Group Inc.
Earth Resource Engineers
and Consultants

Monitoring Well ARM-8

Client	: ROCK Real Estate	Drilling Method	: HSA and Rock Coring
ARM Project	: 11411	Date Started	: 2/6/12
Site Location	: 2331 East Market Street	Date Completed	:
	: York, PA	Weather	: 30s, overcast
ARM Representative	: B. Sick	Latitude	:
Drilling Company	: Main Line	Longitude	:
Driller	: Joe	Screen Interval	: 8-18' bgs
Driller's Helper	: Randy	DTW (2 hrs)	: 7.6' bgs

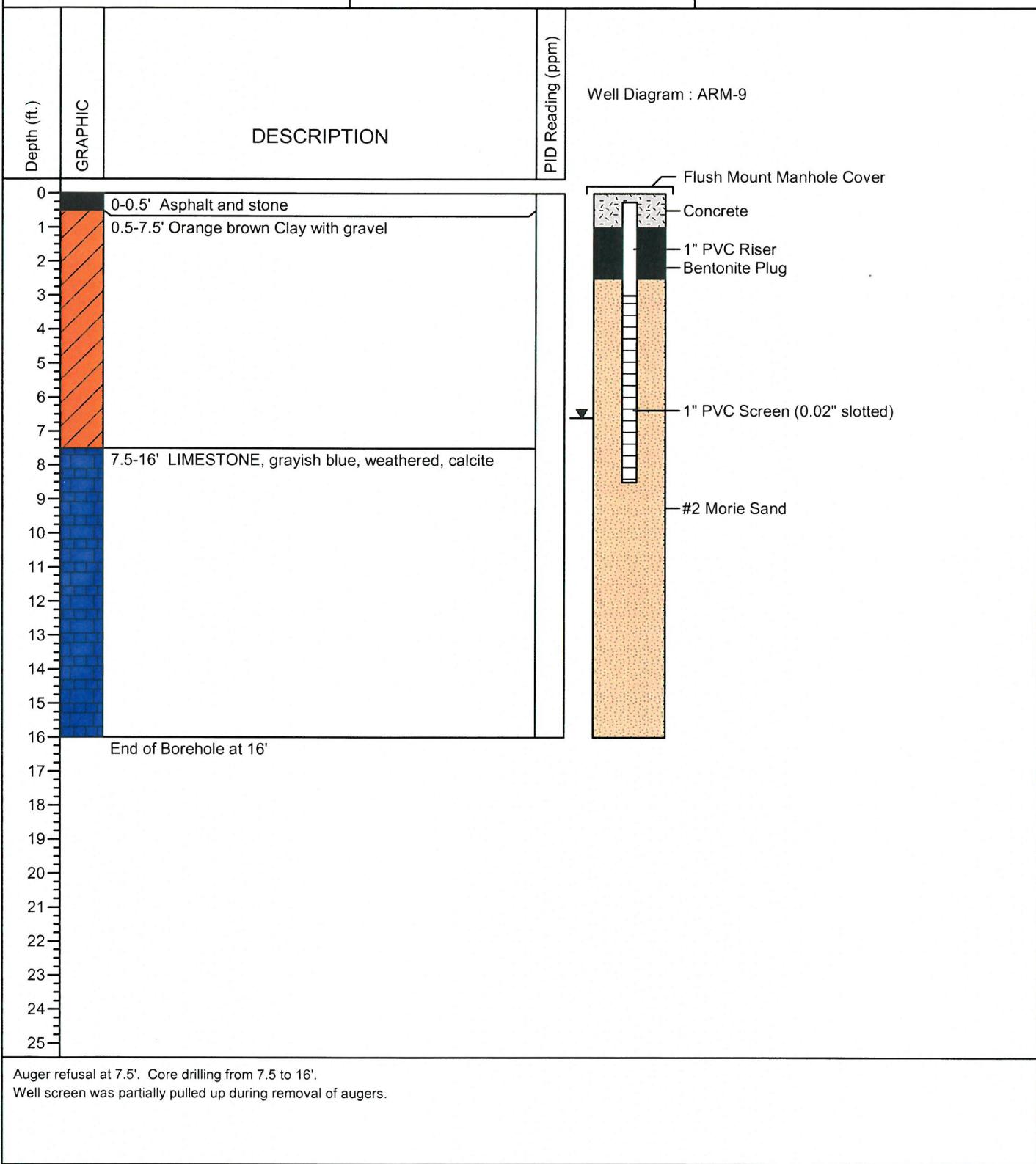




ARM Group Inc.
Earth Resource Engineers
and Consultants

Monitoring Well ARM-9

Client	: ROCK Real Estate	Drilling Method	: HSA and Rock Coring
ARM Project	: 11411	Date Started	: 2/6/12
Site Location	: 2331 East Market Street	Date Completed	:
	: York, PA	Weather	: 30s, overcast
ARM Representative	: B. Sick	Latitude	:
Drilling Company	: Main Line	Longitude	:
Driller	: Joe	Screen Interval	: 3-8.5' bgs
Driller's Helper	: Randy	DTW (2 hrs)	: 6.6' bgs



LOG OF WELL NO. GTA-10

Sheet 1 of 1

PROJECT: **East Market Street**
 PROJECT NO.: **141834**
 PROJECT LOCATION: **2331 E. Market Street**

WATER LEVEL (ft): 
 DATE: _____
 CAVED (ft): _____

DATE STARTED: **11/12/14**
 DATE COMPLETED: **11/13/14**
 DRILLING CONTRACTOR: **Eichelbergers, Inc.**
 EQUIPMENT: **Schramm T555**
 DRILLER: **Tim Westover**
 DRILLING METHOD: **Air Hammer**
 BORING DIA (in): **10**
 CASING TYPE: **Steel**
 SCREEN TYPE: **PVC**

WATER ENCOUNTERED DURING DRILLING (ft): _____
 GROUND SURFACE ELEVATION: _____
 DATUM: _____
 LOGGED BY: **J. Mutter**
 CHECKED BY: **B. Myers**

SAMPLING METHOD: **Grab**
 Casing Dia (in.): **6**
 Screen Slot Size(in): **0.020"**
 Casing Len. (ft): **20**
 Screen Len. (ft): **15**

SAMPLE NUMBER	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft.)	ELEVATION (ft.)	DEPTH (ft.)	PID READING	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS	WELL CONSTRUCTION DETAILS
				0.0					Asphalt and gravel		
				-0.5					Dark brown CLAY, some silt		
				-3.0					Red-brown CLAY and SILT		
				-6.0	5				Dark grey medium- to fine-grain	Damp, petroleum odor	
				-8.0					SAND and SILT		
				-10					Grey LIMESTONE	Dry	
				-13.0					Grey LIMESTONE, trace dark grey		
				-19.0					Shale		
				20					Grey LIMESTONE, some dark grey		
				20					Shale		
				30						Fractures 27 - 28 feet	
				30						Fractures 30 - 31 feet	
				40						Fractures 35 - 36 feet	
				40						Boring terminated at 40 feet	

NOTES: 6"-diameter steel casing grouted in place to 20 feet; drilled out with 6"-diameter air hammer. 2"-diameter PVC screen and casing placed in borehole and grouted in place.



GEO-TECHNOLOGY
 ASSOCIATES, INC.

14280 Park Center Drive, Suite A
 Laurel, MD 20707

LOG OF WELL NO. GTA-10

Sheet 1 of 1

LOG OF WELL NO. GTA-11

Sheet 1 of 1

PROJECT: **East Market Street**
 PROJECT NO.: **141834**
 PROJECT LOCATION: **2331 E. Market Street**

WATER LEVEL (ft): **2** DATE: **11/12/14**
 CAVED (ft): **—**

DATE STARTED: **11/12/14**
 DATE COMPLETED: **11/12/14**
 DRILLING CONTRACTOR: **Eichelbergers, Inc.**
 EQUIPMENT: **Schramm T555**
 DRILLER: **Tim Westover**
 DRILLING METHOD: **HSA**
 BORING DIA (in): **8.25**
 CASING TYPE: **PVC**
 SCREEN TYPE: **PVC**

WATER ENCOUNTERED DURING DRILLING (ft):
 GROUND SURFACE ELEVATION:

DATUM:

LOGGED BY: **J. Mutter**
 CHECKED BY: **B. Myers**

SAMPLING METHOD: **Grab**

CASING DIA (in.): **2**
 SCREEN SLOT SIZE(in): **0.020"**

CASING LEN. (ft): **12**
 SCREEN LEN. (ft): **8**

SAMPLE NUMBER	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft.)	ELEVATION (ft.)	DEPTH (ft.)	PID READING	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS	WELL CONSTRUCTION DETAILS
				0.0 -0.5	289				Asphalt and gravel Brown fine SAND and SILT, some Clay		
				-6.0 -7.0					Dark brown SILT and CLAY Grey LIMESTONE		
				10						Fractures at 11 feet	
				15							
				-20.0	20					Boring terminated at 20 feet	
				25							

NOTES:



GEO-TECHNOLOGY
 ASSOCIATES, INC.

14280 Park Center Drive, Suite A
 Laurel, MD 20707

LOG OF WELL NO. GTA-11

Sheet 1 of 1

LOG OF WELL NO. GTA-12

Sheet 1 of 1

PROJECT: **East Market Street**
 PROJECT NO.: **141834**
 PROJECT LOCATION: **2331 E. Market Street**

WATER LEVEL (ft):  DATE: _____
 CAVED (ft): _____

DATE STARTED: **11/12/14**
 DATE COMPLETED: **11/12/14**
 DRILLING CONTRACTOR: **Eichelbergers, Inc.**
 EQUIPMENT: **Schramm T555**
 DRILLER: **Tim Westover**
 DRILLING METHOD: **HSA**
 BORING DIA (in): **8.25**
 CASING TYPE: **PVC**
 SCREEN TYPE: **PVC**

WATER ENCOUNTERED DURING DRILLING (ft): _____
 GROUND SURFACE ELEVATION: _____
 DATUM: _____

SAMPLING METHOD: **Grab**
 Casing Dia (in.): **2**
 Screen Slot Size(in): **0.020"**
 Casing Len. (ft): **10**
 Screen Len. (ft): **10**

SAMPLE NUMBER	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft.)	ELEVATION (ft.)	DEPTH (ft.)	PID READING	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS	WELL CONSTRUCTION DETAILS
				0.0					Asphalt and gravel Dark brown fine SAND and CLAY		
				-0.5					Brown SILT and CLAY		
				-2.0							
				5							
				-6.0		3			Dark brown SILT and CLAY	Damp	
				-8.0					Grey LIMESTONE	Dry	
				10							
				-15.0					Dark grey SHALE		
				-16.0					Grey LIMESTONE		
				-20.0	20					Boring terminated at 20 feet	
				25							

NOTES:



GEO-TECHNOLOGY
ASSOCIATES, INC.

14280 Park Center Drive, Suite A
Laurel, MD 20707

LOG OF WELL NO. GTA-12

Sheet 1 of 1

WATER WELL COMPLETION REPORT

Well Driller: EICHELBERGERS INC.	Driller Well ID: KR14100-GTA10
Driller License: 0198	Local Permit #:
Type of Activity: New Well	Original Well By: Current Driller
Date Drilled: 11/14/2014	Drilling Method: AIR ROTARY
Owner: Elliott and Buchart Address of Well: 2331 E. Market Street Zipcode: 17402 County: YORK Municipality: SPRINGETTSBURY Municipality Type: T Coordinate Method: Commercial Street Atlas Program Quadrangle: YORK Latitude: 39.97477 Longitude: -76.68174	
Well Depth (<i>ft</i>): 40 Well Finish: SCREEN Depth to Bedrock (<i>ft</i>): 8 Did Not Encounter Bedrock: Well Yield (<i>gpm</i>): Yield Measure Method: WATCH & BUCKET Static Water Level: Water level after yield test: <i>(ft below land surface)</i> <i>(ft below land surface)</i> Length of Yield Test: 30 Saltwater Zone (<i>ft</i>): <i>(minutes)</i> Use of Well: OBSERVATION Use of Water: UNUSED	

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
-----------------	--------------------	--

Unit Top 1: 0	Unit Bottom 1: 8	Unit 1: orange clays and silts
----------------------	-------------------------	---------------------------------------

Unit Top 2: 8	Unit Bottom 2: 40	Unit 2: limestone
----------------------	--------------------------	--------------------------

BOREHOLE

Section 1: Top: 0	Bottom: 20	Diameter: 10
Section 2: Top: 20	Bottom: 40	Diameter: 6

CASING**Casing 1:**

Top: 0 Bottom: 25 Diameter: 2 Material: PVC OR OTHER PLASTIC

Seal(GROUT) 1:

Top: 0 Bottom: 23 Type: BENTONITE CHIPS/PELLETS

Casing 2:

Top: 0 Bottom: 20 Diameter: 6 Material: STEEL

Seal(GROUT) 2:

Top: 0 Bottom: 20 Type: BENTONITE SLURRY

SCREEN/SLOT

Screen 1:	Top: 25	Bottom: 40	Diameter: 2
	Type: SCREEN		
	Material: PLASTIC		Slot Size: 0.02
	Packing: Screened Sand		

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

EICHELBERGERS, INC.

107 TEXACO ROAD

MECHANICSBURG, PA 17050-2626

Driller's Signature (required)

Date

WATER WELL COMPLETION REPORT

Well Driller: **EICHELBERGERS INC.**Driller Well ID: **KR14100-GTA11**Driller License: **0198**

Local Permit #:

Type of Activity: **New Well**Original Well By: **Current Driller**Date Drilled: **11/14/2014**Drilling Method: **AIR ROTARY**Owner: **Elliott and Buchart**Address of Well: **2331 E. Market Street**Zipcode: **17402**County: **YORK**Municipality: **SPRINGETTSBURY**Municipality Type: **T**Coordinate Method: **Commercial Street Atlas Program**Quadrangle: **YORK**Latitude: **39.97480**Longitude: **-76.68177**Well Depth (ft): **20**Well Finish: **SCREEN**Depth to Bedrock (ft): **8.5**

Did Not Encounter Bedrock:

Well Yield (gpm):

Yield Measure Method: **WATCH & BUCKET**Static Water Level:
(ft below land surface)Water level after yield test:
(ft below land surface)Length of Yield Test: **30**
(minutes)

Saltwater Zone (ft):

Use of Well: **OBSERVATION**Use of Water: **UNUSED**Description of Well Location and Other Notes:
Some water at 16 feet.

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
-----------------	--------------------	--

Unit Top 1: **0** Unit Bottom 1: **8.5** Unit 1: **orange clays and silts**Unit Top 2: **8.5** Unit Bottom 2: **20** Unit 2: **limestone**

BOREHOLE

Section 1: Top: **0** Bottom: **20** Diameter: **6**

CASING

Casing 1:

Top: **0** Bottom: **10** Diameter: **2** Material: **PVC OR OTHER
PLASTIC**

Seal(GROUT) 1:

Top: **0** Bottom: **8** Type: **BENTONITE CHIPS/PELLETS**

SCREEN/SLOT

Screen 1: Top: **10** Bottom: **20** Diameter: **2**
Type: **SCREEN**
Material: **PLASTIC** Slot Size: **0.02**
Packing: **Screened Sand**

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

EICHELBERGERS, INC.

107 TEXACO ROAD

MECHANICSBURG, PA 17050-2626

Driller's Signature (required)

Date

WATER WELL COMPLETION REPORT

Well Driller: **EICHELBERGERS INC.**Driller Well ID: **KR14100-GTA12**Driller License: **0198**

Local Permit #:

Type of Activity: **New Well**Original Well By: **Current Driller**Date Drilled: **11/14/2014**Drilling Method: **AIR ROTARY**Owner: **Elliott and Buchart**Address of Well: **2331 E. Market Street**Zipcode: **17402**County: **YORK**Municipality: **SPRINGETTSBURY**Municipality Type: **T**Coordinate Method: **Commercial Street Atlas Program**Quadrangle: **YORK**Latitude: **39.97474**Longitude: **-76.68199**Well Depth (*ft*): **20**Well Finish: **SCREEN**Depth to Bedrock (*ft*): **7.5**

Did Not Encounter Bedrock:

Well Yield (*gpm*):Yield Measure Method: **WATCH & BUCKET**Static Water Level:
(*ft below land surface*)Water level after yield test:
(*ft below land surface*)Length of Yield Test: **30**
(*minutes*)Saltwater Zone (*ft*):Use of Well: **OBSERVATION**Use of Water: **UNUSED**Description of Well Location and Other Notes:
Some water at 11 feet.

DRILLER'S LOG

<u>UNIT TOP</u>	<u>UNIT BOTTOM</u>	<u>DESCRIPTION OF UNITS PENETRATED</u>
-----------------	--------------------	--

Unit Top 1: **0** Unit Bottom 1: **7.5** Unit 1: **orange clays and silts**Unit Top 2: **7.5** Unit Bottom 2: **20** Unit 2: **limestone**

BOREHOLE

Section 1: Top: 0 Bottom: 20 Diameter: 6

CASING**Casing 1:**

Top: 0 Bottom: 8 Diameter: 2 Material: PVC OR OTHER PLASTIC

Seal(Grout) 1:

Top: 0 Bottom: 6 Type: BENTONITE CHIPS/PELLETS

SCREEN/SLOT

Screen 1: Top: 8 Bottom: 20 Diameter: 2
Type: SCREEN
Material: PLASTIC Slot Size: 0.02
Packing: Screened Sand

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

EICHELBERGERS, INC.

107 TEXACO ROAD

MECHANICSBURG, PA 17050-2626

Driller's Signature (required)

Date

1539 Bobali Drive
Harrisburg, Pennsylvania 17104



Phone: (717) 564-4200
Fax: (717) 939-6594

September 30, 2019

Mr. Satya Ganti
2331 East Market Street, LLC
4235 Beaumont Road
Dover, Pennsylvania 17315

RE: Remedial Progress Report – September 2019
Plaza 2331
2331 East Market Street
Springettsbury Township, York County, Pennsylvania
EPSVT Project No. G11788

Mr. Ganti:

Environmental Products & Services of Vermont, Inc. (EPSVT) is providing the following report that details the progress of vapor intrusion (VI) assessment and mitigation activities proposed as part of the Work Plan dated January 31, 2019 completed for the property located at 2331 East Market Street in Springettsbury Township, York County, Pennsylvania (Site) (GPS Coordinates: 39.974536° N, -76.681554° W) (**Figure 1**).

Background

Tasks proposed in the January 31, 2019 Work Plan (WP) were scoped to further characterize the extent of impacts to the indoor air quality (IAQ) of the Site building, develop an appropriate scope for design/installation of a mitigation system and completion of IAQ monitoring, assess VI concerns in the Site building and along the downgradient (western and northern) boundaries of the Subject Property, and the in-situ treatment in the sub slab of the Site building in the suspected source area (VP-3) in an attempt to reduce contaminant concentrations.

The site had a dry cleaning business during late 1960's and studies conducted during 2013 to 2016 showed elevated values of chlorinated hydrocarbons in soil and in one sub-slab sample near the sewer sump in the mechanical room, which is located in the southeastern corner of the western basement floor slab. However, there were no efforts to remediate the contaminants neither in soil nor in the sub-slab contaminations. Currently, 2331 East Market Street LLC has introduced a protocol for remediating the chlorinated hydrocarbon contamination both in soil and in the sub-slab vapor via application of bioremediation products manufactured by Sarva Bio Remed, LLC.

Baseline IAQ

Prior to tasks completed at the direction of 2331 East Market Street LLC, there was no assessment of the indoor air quality in the Site building, hence there is no historical information on the values of chlorinated compounds in the indoor air.

Baseline IAQ sampling was completed in the Site building on April 4 and 18, 2019. The baseline IAQ samples were collected from twelve interior locations (designated IA-001 through IA-012) and one exterior location (designated IA-Ambient (On Dock)) (**Figure 2**). An additional round of IAQ samples was collected from the eight interior locations within the Site building basement (IA-001 through IA-008), as well as the IA-Ambient (On Dock) location on July 24, 2019. The baseline and additional IAQ

samples were collected using laboratory supplied 6-liter SummaTM canisters for an 8-hour duration with a flow of less than 200 milliliters/minute (mL/min). The previous existing sub slab depressurization system (SSDS) was shut down during the baseline IAQ sampling, which was performed with all HVAC (heating, ventilation, and air-conditioning) units operating under normal settings.

The IAQ samples were submitted to Pace Analytical Services, LLC of Minneapolis, Minnesota (Pace) and analyzed via Environmental Protection Agency (EPA) method TO-15 for a project specific shortlist of compounds including benzene, methyl ethyl ketone (MEK), carbon disulfide, cis 1,2-dichloroethylene (DCE), trans 1,2-DCE, 1,1-DCE, dichlorodifluoromethane, ethylbenzene, 4-ethyltoluene, methylene chloride, 1,1,1-trichloroethylene (TCE), toluene, tetrachloroethylene (PCE), TCE, 1,2,4-trimethyl benzene (TMB), 1,3,5-TMB, vinyl chloride, and xylenes (project shortlist). A copy of the **Pace reports** for the laboratory analyses completed are attached. A summary of the results of for the laboratory analysis performed on the IAQ samples is provided in **Table 1**. The results revealed that twelve of the eighteen project shortlist compounds were detected in the indoor air at concentrations above laboratory reporting limits. Two of the project shortlist compounds (PCE and TCE) were detected at concentrations exceeding the Non-Residential Indoor Air screening values as set forth in Pennsylvania's Land Recycling and Remediation Standards Act (Act 2) regulations in eight of the thirteen locations sampled. The elevated PCE and TCE concentrations were only present in the locations within the Site building basement.

Soil Gas Characterization

On June 10, 2019, EPSVT mobilized a track mounted direct push drill rig to the Site to complete the installation of six soil gas points at the Site (designated SG-101 through SG-106)(Figure 3). SG-101 and SG-106 were installed on the western side of the Site building, adjacent to the boundary between the Site and a commercial building. The locations of SG-101 and SG-106 was selected in part to assess the potential for contaminant migration from an upgradient source on to the Site. SG-102 and SG-103 were installed along the western boundary adjacent to several residential buildings. SG-104 and SG-105 were installed along the northern boundary adjacent to commercial properties.

The construction of each point included a six inch long 0.25-inch diameter screened steel vapor sampling implant placed at the bottom of a 2-inch diameter borehole connected to 0.25-inch diameter Teflon lined low density polyethylene (LDPE) tubing with a hose barb at the ground surface. The annular space of the borehole was filled with 60-100 mesh glass beads within the screened interval of the sampling point (e.g., beads from the bottom of the borehole extended up to approximately 0.5 feet above the implant), and sealed with bentonite seal to approximately 0.5 feet bgs. Water was encountered in the SG-101 boring locations at a depth of 1.8 feet bgs. Equipment refusal was encountered in the SG-102, SG-103, SG-104, SG-105, and SG-106 at depths of 9.5 feet bgs, 7.0 feet bgs, 5.0 feet bgs, 6.0 feet bgs, and 12.0 feet bgs, respectively. The bottom of the screened steel vapor sampling implant for SG-101, SG-102, SG-103, SG-104, SG-105, and SG-106 at depths of 1.8 feet bgs, 9.5 feet bgs, 7.0 feet bgs, 5.0 feet bgs, 6.0 feet bgs, and 12.0 feet bgs, respectively. Each of the locations was finished with a protective flush mount drive over cover.

EPSVT returned to the Site on June 18, 2019 to collect samples from the newly installed sampling points. The samples were collected using laboratory supplied 1-liter SummaTM canisters for 30 minute duration with flow of less than 200 mL/min. Prior to collection, a shut-in test was performed on the sampling train pursuant to protocols set forth in the Land Recycling Program Technical Guidance Manual for VI into Buildings from Groundwater and Soil under Act 2 (VI Guidance). Following the shut-in test, each point was purged a minimum of three sampling train volumes at a rate of less than 200 mL/min. Sampling was conducted in accordance with protocols set forth in the VI Guidance including

the use of a helium shroud as a means of leak detection during purging and sampling. The six soil gas samples were submitted to Pace and analyzed via EPA method TO-15 for the project shortlist, as well as helium.

The results of the laboratory analysis revealed that all six samples contained detectable concentrations of between two and thirteen of the eighteen project shortlist compounds (**Table 2**). SG-101 and SG-104 contained three (PCE, TCE, and vinyl chloride) and one (PCE) of the project shortlist compounds at concentrations exceeding Residential Near Source VI Screening Values, respectively. It is important to note that SG-106 contained one of the project shortlist compounds (trans 1,2-DCE) at concentrations exceeding Residential Near Source VI Screening Values, and three of the project shortlist compounds (PCE, TCE, and vinyl chloride) at concentrations exceeding Residential and Non-Residential Near Source VI Screening Values. Project shortlist compounds concentrations detected in SG-102, SG-103, and SG-105 did not exceed any Near Source VI Screening Values. Helium was not detected above laboratory reporting limits in any of the six near source soil gas samples.

Sub Slab Depressurization System Upgrade

On July 2, 2019, EPSVT replaced the existing Radon Away® XP151C fan (151) that powered the sub slab depressurization system (SSDS) with a Radon Away ® RP265 fan (265). The 265 is a 139 watt fan with a maximum operating pressure of 2.3 inches of water column (" WC), which is an upgrade from the 151, a 70 watt fan with a maximum operating pressure of 1.4 " WC. Utilizing the existing Radon Away® Easy Read Manometer located on the 3-inch polyvinyl chloride (PVC) piping on the suction side of the fan, the operating pressure for the SSDS was documented to have increased from 0.65 " WC to 0.85 " WC.

In-Situ Treatment

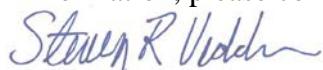
An in-situ bioremediation agent (VaporRemed®) has been applied to the sub slab of the Site building by Sarva Bio Remed, LLC of York, Pennsylvania. During earlier investigation, it was documented that concentrations of project shortlist compounds (namely PCE and TCE) were exceedingly high at VP-3. It was felt that VP-3 was installed directly within a contaminant source area. Therefore, the bioremediation agent was applied directly into the sampling point to initiate remediation. The VaporRemed® application has been completed at the VP-3 sampling location on roughly a weekly basis between February 2019 and September 2019. The VaporRemed® has been gravity feed directly into VP-3 at a rate of one to three gallons a week depending on the existing saturation of the sub slab materials.

In order to assess the effectiveness of the application of VaporRemed® in reducing project shortlist compounds concentrations, EPSVT collected a series of sub slab vapor samples from the VP-3 location during the treatment completed on May 22 and July 1, 2019. Sub slab vapor samples were collected prior to the addition of VaporRemed® (designated VP-3 Before VR), immediately after the addition of VaporRemed® (designated VP-3 After VR), and 24 hours after the addition of VaporRemed® (designated VP-3 Day 2/VP-3 After 24 HR). The samples were collected using laboratory supplied 1-liter Summa™ canisters for 30 minute duration with flow of less than 200 mL/min. Prior to collection, a shut-in test was performed on the sampling train pursuant to protocols set forth in the VI Guidance. Following the shut-in test, each point was purged a minimum of three sampling train volumes at a rate of less than 200 mL/min. The six soil gas samples were submitted to Pace and analyzed via EPA method TO-15 for the project shortlist. Copies of the Pace reports for the analysis performed on the samples are provided as an attachment. The results of the laboratory analysis performed on the samples are summarized in **Table 3**.

Summary

Baseline IAQ assessment reveals that project shortlist compounds at concentrations exceeding Non-Residential Indoor Air VI Screening Values have been documented in all eight of the sampling locations in the basement of the Site building with the highest levels in the western end of the basement. None of the sampling locations from the ground floor contained project shortlist compounds at concentrations exceeding Non-Residential Indoor Air VI Screening Values. Initial characterization sampling revealed that project shortlist compounds concentrations were detected in excess of the Residential and/or Non-Residential Near Source VI Screening Values in the central portion of the Site including locations adjacent to the loading dock (e.g., SG-101 and SG-106) and directly north of the loading dock (e.g., SG-104, downgradient of the western end of the Site building).

Thank you for the opportunity to provide our services. If you have questions or require additional information, please contact the undersigned at your convenience.



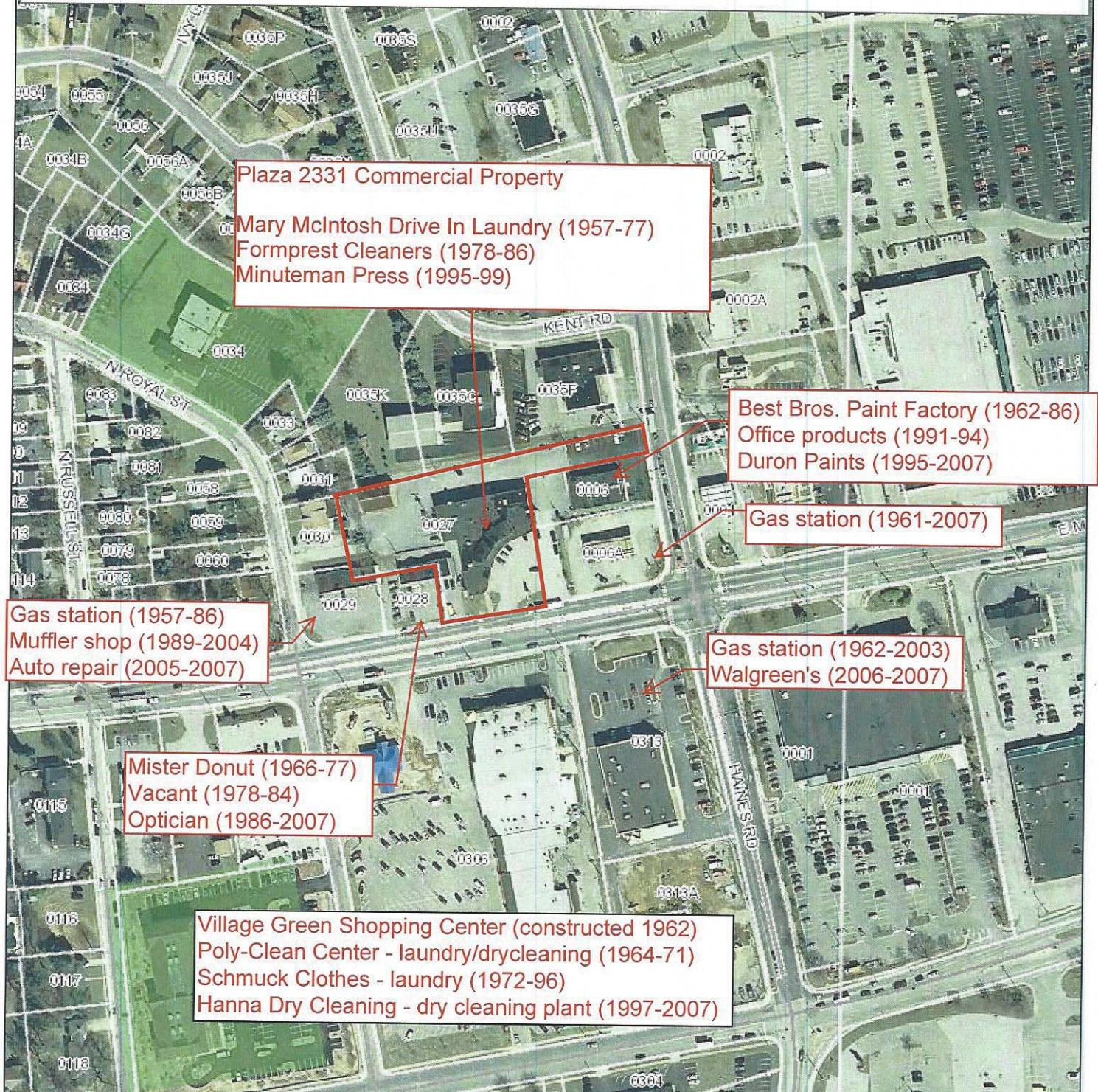
Steven R. Vedder
Senior Environmental Scientist

Attachments:

- Figure 1 – Site Location Map
- Figure 2 – IAQ Sampling Location Plan
- Pace Reports
- Table 1 – Summary of IAQ Analytical Data
- Figure 3 – Soil Gas Sampling Location Plan
- Table 2 – Summary of Soil Gas Analytical Data
- ProUCL Mann-Kendall Trend Tests

Figure 1 - Site Location Map

Plaza 2331
City Directory Summary (1948 - 2007 directories)



York
County
Assessment
Office



Road
Municipalities
100 yr Floodplain
Easements
Maps are not from actual survey



06/18/2014
Scale 1:2400

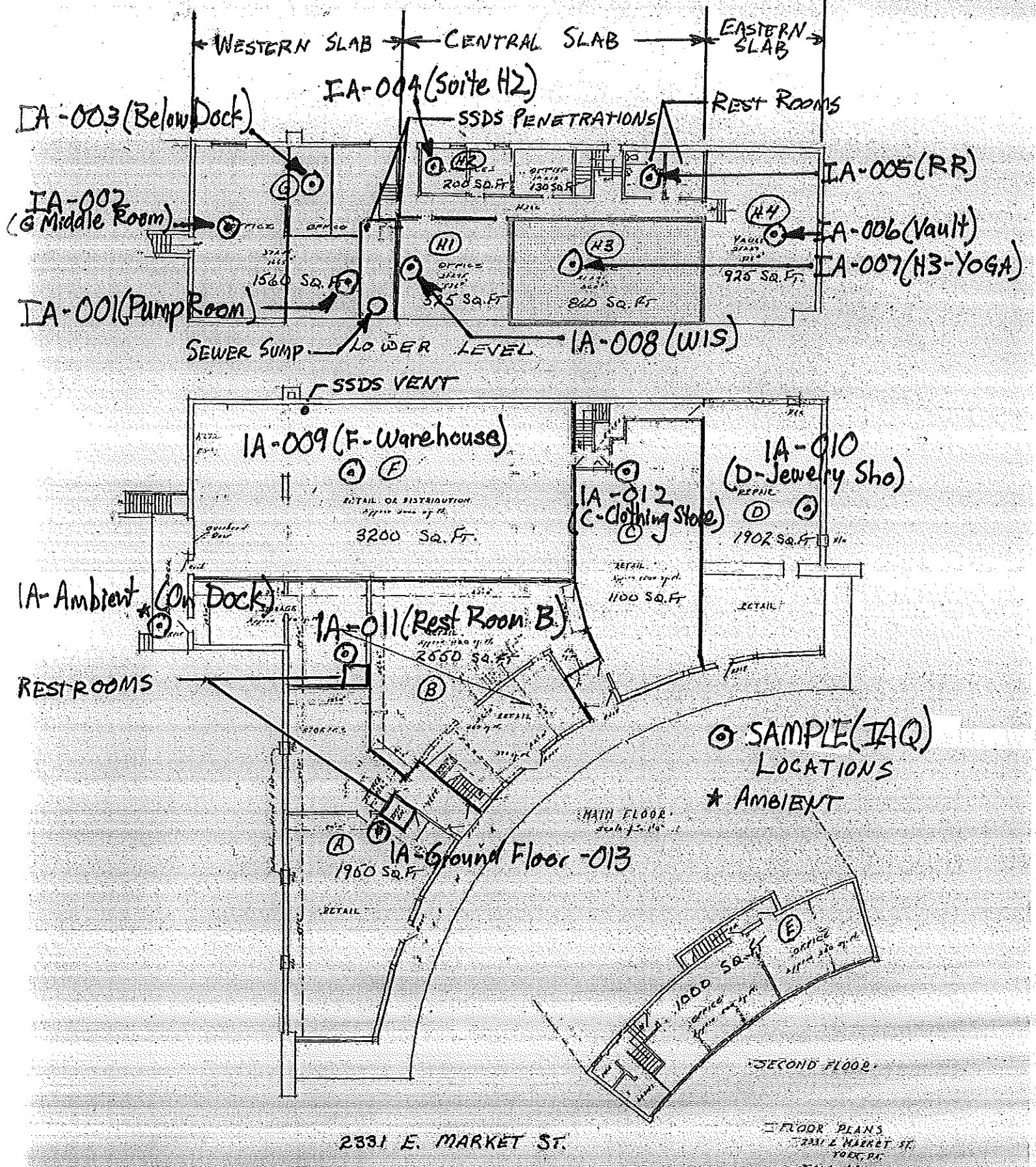


FIGURE 3
IAQ Sampling Location Plan

April 18, 2019

Steve Vedder
Environmental Products & Services of Vermont,
Inc.
1539 Bobali Drive
Harrisburg, PA 17104

RE: Project: 2331 E-Market St LLC
Pace Project No.: 10469665

Dear Steve Vedder:

Enclosed are the analytical results for sample(s) received by the laboratory on April 05, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nathan Boberg
nathan.boberg@pacelabs.com
(612)360-0728
Project Manager

Enclosures

cc: Satya Ganti, Sarva Bio Remed, LLC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2331 E-Market St LLC
 Pace Project No.: 10469665

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
 A2LA Certification #: 2926.01
 Alabama Certification #: 40770
 Alaska Contaminated Sites Certification #: 17-009
 Alaska DW Certification #: MN00064
 Arizona Certification #: AZ0014
 Arkansas DW Certification #: MN00064
 Arkansas WW Certification #: 88-0680
 California Certification #: 2929
 CNMI Saipan Certification #: MP0003
 Colorado Certification #: MN00064
 Connecticut Certification #: PH-0256
 EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
 Florida Certification #: E87605
 Georgia Certification #: 959
 Guam EPA Certification #: MN00064
 Hawaii Certification #: MN00064
 Idaho Certification #: MN00064
 Illinois Certification #: 200011
 Indiana Certification #: C-MN-01
 Iowa Certification #: 368
 Kansas Certification #: E-10167
 Kentucky DW Certification #: 90062
 Kentucky WW Certification #: 90062
 Louisiana DEQ Certification #: 03086
 Louisiana DW Certification #: MN00064
 Maine Certification #: MN00064
 Maryland Certification #: 322
 Massachusetts Certification #: M-MN064
 Michigan Certification #: 9909
 Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137
 Minnesota Petrofund Certification #: 1240
 Mississippi Certification #: MN00064
 Missouri Certification #: 10100
 Montana Certification #: CERT0092
 Nebraska Certification #: NE-OS-18-06
 Nevada Certification #: MN00064
 New Hampshire Certification #: 2081
 New Jersey Certification #: MN002
 New York Certification #: 11647
 North Carolina DW Certification #: 27700
 North Carolina WW Certification #: 530
 North Dakota Certification #: R-036
 Ohio DW Certification #: 41244
 Ohio VAP Certification #: CL101
 Oklahoma Certification #: 9507
 Oregon Primary Certification #: MN300001
 Oregon Secondary Certification #: MN200001
 Pennsylvania Certification #: 68-00563
 Puerto Rico Certification #: MN00064
 South Carolina Certification #: 74003001
 Tennessee Certification #: TN02818
 Texas Certification #: T104704192
 Utah Certification #: MN00064
 Vermont Certification #: VT-027053137
 Virginia Certification #: 460163
 Washington Certification #: C486
 West Virginia DEP Certification #: 382
 West Virginia DW Certification #: 9952 C
 Wisconsin Certification #: 999407970
 Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2331 E-Market St LLC
Pace Project No.: 10469665

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10469665001	IA-001 (Pump Room)	Air	04/04/19 04:00	04/05/19 09:45
10469665002	IA-002 (G Middle Room)	Air		04/05/19 09:45
10469665003	IA-003 (Below Dock)	Air		04/05/19 09:45
10469665004	IA-004 (Suite H2)	Air		04/05/19 09:45
10469665005	IA-005 (R.R)	Air		04/05/19 09:45
10469665006	IA-006 (Vault)	Air		04/05/19 09:45
10469665007	IA-007 (H3-Yoga)	Air		04/05/19 09:45
10469665008	IA-008 (W15)	Air		04/05/19 09:45
10469665009	IA-Ambient (On the Dock)	Air		04/05/19 09:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2331 E-Market St LLC
 Pace Project No.: 10469665

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10469665001	IA-001 (Pump Room)	TO-15	MLS	22
10469665002	IA-002 (G Middle Room)	TO-15	MLS	22
10469665003	IA-003 (Below Dock)	TO-15	MLS	22
10469665004	IA-004 (Suite H2)	TO-15	MLS	22
10469665005	IA-005 (R.R)	TO-15	MLS	22
10469665006	IA-006 (Vault)	TO-15	MLS	22
10469665007	IA-007 (H3-Yoga)	TO-15	MJL	22
10469665008	IA-008 (W15)	TO-15	MJL	22
10469665009	IA-Ambient (On the Dock)	TO-15	MLS	22

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2331 E-Market St LLC
Pace Project No.: 10469665

Method: TO-15
Description: TO15 MSV AIR
Client: Sarva Bio Remed, LLC
Date: April 18, 2019

General Information:

9 samples were analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 599489

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3241160)
 - 2,2,4-Trimethylpentane
- DUP (Lab ID: 3241937)
 - 2,2,4-Trimethylpentane
- DUP (Lab ID: 3241938)
 - 2,2,4-Trimethylpentane
- IA-001 (Pump Room) (Lab ID: 10469665001)
 - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3241161)
 - 2,2,4-Trimethylpentane

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2331 E-Market St LLC
Pace Project No.: 10469665

Method: TO-15

Description: TO15 MSV AIR

Client: Sarva Bio Remed, LLC

Date: April 18, 2019

Analyte Comments:

QC Batch: 600032

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3243705)
 - 2,2,4-Trimethylpentane
- DUP (Lab ID: 3244843)
 - 2,2,4-Trimethylpentane
- DUP (Lab ID: 3244844)
 - 2,2,4-Trimethylpentane
- IA-002 (G Middle Room) (Lab ID: 10469665002)
 - 2,2,4-Trimethylpentane
- IA-003 (Below Dock) (Lab ID: 10469665003)
 - 2,2,4-Trimethylpentane
- IA-004 (Suite H2) (Lab ID: 10469665004)
 - 2,2,4-Trimethylpentane
- IA-005 (R.R) (Lab ID: 10469665005)
 - 2,2,4-Trimethylpentane
- IA-006 (Vault) (Lab ID: 10469665006)
 - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3243706)
 - 2,2,4-Trimethylpentane

QC Batch: 600050

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3243792)
 - 2,2,4-Trimethylpentane
- DUP (Lab ID: 3243970)
 - 2,2,4-Trimethylpentane
- DUP (Lab ID: 3243971)
 - 2,2,4-Trimethylpentane
- IA-007 (H3-Yoga) (Lab ID: 10469665007)
 - 2,2,4-Trimethylpentane
- IA-008 (W15) (Lab ID: 10469665008)
 - 2,2,4-Trimethylpentane
- IA-Ambient (On the Dock) (Lab ID: 10469665009)
 - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3243793)
 - 2,2,4-Trimethylpentane

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

Sample: IA-001 (Pump Room)	Lab ID: 10469665001	Collected: 04/04/19 04:00	Received: 04/05/19 09:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	10.3	ug/m3	3.3	1.39		04/15/19 10:16	67-64-1	
Benzene	0.80	ug/m3	0.45	1.39		04/15/19 10:16	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.2	1.39		04/15/19 10:16	78-93-3	
Carbon disulfide	ND	ug/m3	0.88	1.39		04/15/19 10:16	75-15-0	
Dichlorodifluoromethane	2.1	ug/m3	1.4	1.39		04/15/19 10:16	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.1	1.39		04/15/19 10:16	75-35-4	
cis-1,2-Dichloroethene	38.9	ug/m3	1.1	1.39		04/15/19 10:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.1	1.39		04/15/19 10:16	156-60-5	
Ethylbenzene	ND	ug/m3	1.2	1.39		04/15/19 10:16	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.5	1.39		04/15/19 10:16	622-96-8	
n-Hexane	ND	ug/m3	1.0	1.39		04/15/19 10:16	110-54-3	
Methylene Chloride	ND	ug/m3	4.9	1.39		04/15/19 10:16	75-09-2	
Tetrachloroethene	188	ug/m3	0.96	1.39		04/15/19 10:16	127-18-4	
Toluene	2.3	ug/m3	1.1	1.39		04/15/19 10:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.5	1.39		04/15/19 10:16	71-55-6	
Trichloroethene	9.3	ug/m3	0.76	1.39		04/15/19 10:16	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.4	1.39		04/15/19 10:16	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.4	1.39		04/15/19 10:16	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.3	1.39		04/15/19 10:16	540-84-1	N2
Vinyl chloride	0.64	ug/m3	0.36	1.39		04/15/19 10:16	75-01-4	
m&p-Xylene	ND	ug/m3	2.5	1.39		04/15/19 10:16	179601-23-1	
o-Xylene	ND	ug/m3	1.2	1.39		04/15/19 10:16	95-47-6	

Sample: IA-002 (G Middle Room)	Lab ID: 10469665002	Collected:	Received: 04/05/19 09:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	10.2	ug/m3	3.4	1.41		04/17/19 12:28	67-64-1	
Benzene	0.74	ug/m3	0.46	1.41		04/17/19 12:28	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.2	1.41		04/17/19 12:28	78-93-3	
Carbon disulfide	ND	ug/m3	0.89	1.41		04/17/19 12:28	75-15-0	
Dichlorodifluoromethane	2.2	ug/m3	1.4	1.41		04/17/19 12:28	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.1	1.41		04/17/19 12:28	75-35-4	
cis-1,2-Dichloroethene	38.0	ug/m3	1.1	1.41		04/17/19 12:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.1	1.41		04/17/19 12:28	156-60-5	
Ethylbenzene	ND	ug/m3	1.2	1.41		04/17/19 12:28	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.5	1.41		04/17/19 12:28	622-96-8	
n-Hexane	ND	ug/m3	1.0	1.41		04/17/19 12:28	110-54-3	
Methylene Chloride	ND	ug/m3	5.0	1.41		04/17/19 12:28	75-09-2	
Tetrachloroethene	190	ug/m3	0.97	1.41		04/17/19 12:28	127-18-4	
Toluene	1.8	ug/m3	1.1	1.41		04/17/19 12:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.41		04/17/19 12:28	71-55-6	
Trichloroethene	9.0	ug/m3	0.77	1.41		04/17/19 12:28	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.4	1.41		04/17/19 12:28	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.4	1.41		04/17/19 12:28	108-67-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

Sample: IA-002 (G Middle Room)	Lab ID: 10469665002	Collected:	Received: 04/05/19 09:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
2,2,4-Trimethylpentane	ND	ug/m3	3.3	1.41		04/17/19 12:28	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.37	1.41		04/17/19 12:28	75-01-4	
m&p-Xylene	ND	ug/m3	2.5	1.41		04/17/19 12:28	179601-23-1	
o-Xylene	ND	ug/m3	1.2	1.41		04/17/19 12:28	95-47-6	
Sample: IA-003 (Below Dock)	Lab ID: 10469665003	Collected:	Received: 04/05/19 09:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	12.6	ug/m3	3.4	1.41		04/17/19 12:59	67-64-1	
Benzene	0.70	ug/m3	0.46	1.41		04/17/19 12:59	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.2	1.41		04/17/19 12:59	78-93-3	
Carbon disulfide	ND	ug/m3	0.89	1.41		04/17/19 12:59	75-15-0	
Dichlorodifluoromethane	2.3	ug/m3	1.4	1.41		04/17/19 12:59	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.1	1.41		04/17/19 12:59	75-35-4	
cis-1,2-Dichloroethene	40.8	ug/m3	1.1	1.41		04/17/19 12:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.1	1.41		04/17/19 12:59	156-60-5	
Ethylbenzene	ND	ug/m3	1.2	1.41		04/17/19 12:59	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.5	1.41		04/17/19 12:59	622-96-8	
n-Hexane	ND	ug/m3	1.0	1.41		04/17/19 12:59	110-54-3	
Methylene Chloride	ND	ug/m3	5.0	1.41		04/17/19 12:59	75-09-2	
Tetrachloroethene	188	ug/m3	0.97	1.41		04/17/19 12:59	127-18-4	
Toluene	2.4	ug/m3	1.1	1.41		04/17/19 12:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.41		04/17/19 12:59	71-55-6	
Trichloroethene	9.0	ug/m3	0.77	1.41		04/17/19 12:59	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.4	1.41		04/17/19 12:59	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.4	1.41		04/17/19 12:59	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.3	1.41		04/17/19 12:59	540-84-1	N2
Vinyl chloride	0.70	ug/m3	0.37	1.41		04/17/19 12:59	75-01-4	
m&p-Xylene	ND	ug/m3	2.5	1.41		04/17/19 12:59	179601-23-1	
o-Xylene	ND	ug/m3	1.2	1.41		04/17/19 12:59	95-47-6	
Sample: IA-004 (Suite H2)	Lab ID: 10469665004	Collected:	Received: 04/05/19 09:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	12.6	ug/m3	3.5	1.44		04/17/19 13:29	67-64-1	
Benzene	0.72	ug/m3	0.47	1.44		04/17/19 13:29	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.3	1.44		04/17/19 13:29	78-93-3	
Carbon disulfide	ND	ug/m3	0.91	1.44		04/17/19 13:29	75-15-0	
Dichlorodifluoromethane	2.2	ug/m3	1.5	1.44		04/17/19 13:29	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.44		04/17/19 13:29	75-35-4	

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ANALYTICAL RESULTS

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

Sample: IA-004 (Suite H2)	Lab ID: 10469665004	Collected:			Received: 04/05/19 09:45	Matrix: Air		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
cis-1,2-Dichloroethene	34.6	ug/m3	1.2	1.44			04/17/19 13:29	156-59-2
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.44			04/17/19 13:29	156-60-5
Ethylbenzene	ND	ug/m3	1.3	1.44			04/17/19 13:29	100-41-4
4-Ethyltoluene	ND	ug/m3	3.6	1.44			04/17/19 13:29	622-96-8
n-Hexane	ND	ug/m3	1.0	1.44			04/17/19 13:29	110-54-3
Methylene Chloride	ND	ug/m3	5.1	1.44			04/17/19 13:29	75-09-2
Tetrachloroethene	160	ug/m3	0.99	1.44			04/17/19 13:29	127-18-4
Toluene	3.4	ug/m3	1.1	1.44			04/17/19 13:29	108-88-3
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.44			04/17/19 13:29	71-55-6
Trichloroethene	7.8	ug/m3	0.79	1.44			04/17/19 13:29	79-01-6
1,2,4-Trimethylbenzene	ND	ug/m3	1.4	1.44			04/17/19 13:29	95-63-6
1,3,5-Trimethylbenzene	ND	ug/m3	1.4	1.44			04/17/19 13:29	108-67-8
2,2,4-Trimethylpentane	ND	ug/m3	3.4	1.44			04/17/19 13:29	540-84-1
Vinyl chloride	0.55	ug/m3	0.37	1.44			04/17/19 13:29	75-01-4
m&p-Xylene	ND	ug/m3	2.5	1.44			04/17/19 13:29	179601-23-1
o-Xylene	2.0	ug/m3	1.3	1.44			04/17/19 13:29	95-47-6
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	14.9	ug/m3	3.2	1.34			04/17/19 14:00	67-64-1
Benzene	0.81	ug/m3	0.44	1.34			04/17/19 14:00	71-43-2
2-Butanone (MEK)	ND	ug/m3	4.0	1.34			04/17/19 14:00	78-93-3
Carbon disulfide	ND	ug/m3	0.85	1.34			04/17/19 14:00	75-15-0
Dichlorodifluoromethane	2.4	ug/m3	1.4	1.34			04/17/19 14:00	75-71-8
1,1-Dichloroethene	ND	ug/m3	1.1	1.34			04/17/19 14:00	75-35-4
cis-1,2-Dichloroethene	31.5	ug/m3	1.1	1.34			04/17/19 14:00	156-59-2
trans-1,2-Dichloroethene	ND	ug/m3	1.1	1.34			04/17/19 14:00	156-60-5
Ethylbenzene	ND	ug/m3	1.2	1.34			04/17/19 14:00	100-41-4
4-Ethyltoluene	ND	ug/m3	3.4	1.34			04/17/19 14:00	622-96-8
n-Hexane	1.2	ug/m3	0.96	1.34			04/17/19 14:00	110-54-3
Methylene Chloride	ND	ug/m3	4.7	1.34			04/17/19 14:00	75-09-2
Tetrachloroethene	146	ug/m3	0.92	1.34			04/17/19 14:00	127-18-4
Toluene	8.9	ug/m3	1.0	1.34			04/17/19 14:00	108-88-3
1,1,1-Trichloroethane	ND	ug/m3	1.5	1.34			04/17/19 14:00	71-55-6
Trichloroethene	7.2	ug/m3	0.73	1.34			04/17/19 14:00	79-01-6
1,2,4-Trimethylbenzene	ND	ug/m3	1.3	1.34			04/17/19 14:00	95-63-6
1,3,5-Trimethylbenzene	ND	ug/m3	1.3	1.34			04/17/19 14:00	108-67-8
2,2,4-Trimethylpentane	ND	ug/m3	3.2	1.34			04/17/19 14:00	540-84-1
Vinyl chloride	0.41	ug/m3	0.35	1.34			04/17/19 14:00	75-01-4
m&p-Xylene	ND	ug/m3	2.4	1.34			04/17/19 14:00	179601-23-1
o-Xylene	2.1	ug/m3	1.2	1.34			04/17/19 14:00	95-47-6

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ANALYTICAL RESULTS

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

Sample: IA-006 (Vault)	Lab ID: 10469665006	Collected:	Received: 04/05/19 09:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	20.6	ug/m3	4.4	1.84		04/17/19 14:33	67-64-1	
Benzene	0.79	ug/m3	0.60	1.84		04/17/19 14:33	71-43-2	
2-Butanone (MEK)	ND	ug/m3	5.5	1.84		04/17/19 14:33	78-93-3	
Carbon disulfide	ND	ug/m3	1.2	1.84		04/17/19 14:33	75-15-0	
Dichlorodifluoromethane	2.2	ug/m3	1.9	1.84		04/17/19 14:33	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.5	1.84		04/17/19 14:33	75-35-4	
cis-1,2-Dichloroethene	23.3	ug/m3	1.5	1.84		04/17/19 14:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.84		04/17/19 14:33	156-60-5	
Ethylbenzene	ND	ug/m3	1.6	1.84		04/17/19 14:33	100-41-4	
4-Ethyltoluene	ND	ug/m3	4.6	1.84		04/17/19 14:33	622-96-8	
n-Hexane	2.7	ug/m3	1.3	1.84		04/17/19 14:33	110-54-3	
Methylene Chloride	12.1	ug/m3	6.5	1.84		04/17/19 14:33	75-09-2	
Tetrachloroethene	117	ug/m3	1.3	1.84		04/17/19 14:33	127-18-4	
Toluene	12.8	ug/m3	1.4	1.84		04/17/19 14:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	2.0	1.84		04/17/19 14:33	71-55-6	
Trichloroethene	5.7	ug/m3	1.0	1.84		04/17/19 14:33	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.8	1.84		04/17/19 14:33	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.8	1.84		04/17/19 14:33	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	4.4	1.84		04/17/19 14:33	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.48	1.84		04/17/19 14:33	75-01-4	
m&p-Xylene	ND	ug/m3	3.3	1.84		04/17/19 14:33	179601-23-1	
o-Xylene	2.1	ug/m3	1.6	1.84		04/17/19 14:33	95-47-6	

Sample: IA-007 (H3-Yoga)	Lab ID: 10469665007	Collected:	Received: 04/05/19 09:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	16.7	ug/m3	3.5	1.46		04/17/19 12:39	67-64-1	
Benzene	0.88	ug/m3	0.47	1.46		04/17/19 12:39	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.4	1.46		04/17/19 12:39	78-93-3	
Carbon disulfide	ND	ug/m3	0.92	1.46		04/17/19 12:39	75-15-0	
Dichlorodifluoromethane	2.5	ug/m3	1.5	1.46		04/17/19 12:39	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.46		04/17/19 12:39	75-35-4	
cis-1,2-Dichloroethene	38.6	ug/m3	1.2	1.46		04/17/19 12:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.46		04/17/19 12:39	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.46		04/17/19 12:39	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.6	1.46		04/17/19 12:39	622-96-8	
n-Hexane	ND	ug/m3	1.0	1.46		04/17/19 12:39	110-54-3	
Methylene Chloride	ND	ug/m3	5.2	1.46		04/17/19 12:39	75-09-2	
Tetrachloroethene	183	ug/m3	1.0	1.46		04/17/19 12:39	127-18-4	
Toluene	2.6	ug/m3	1.1	1.46		04/17/19 12:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.46		04/17/19 12:39	71-55-6	
Trichloroethene	8.3	ug/m3	0.80	1.46		04/17/19 12:39	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.5	1.46		04/17/19 12:39	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.5	1.46		04/17/19 12:39	108-67-8	

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ANALYTICAL RESULTS

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

Sample: IA-007 (H3-Yoga)		Lab ID: 10469665007	Collected:		Received: 04/05/19 09:45		Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
2,2,4-Trimethylpentane	ND	ug/m3	3.5	1.46		04/17/19 12:39	540-84-1	N2
Vinyl chloride	0.59	ug/m3	0.38	1.46		04/17/19 12:39	75-01-4	
m&p-Xylene	ND	ug/m3	2.6	1.46		04/17/19 12:39	179601-23-1	
o-Xylene	3.3	ug/m3	1.3	1.46		04/17/19 12:39	95-47-6	
Sample: IA-008 (W15)		Lab ID: 10469665008	Collected:		Received: 04/05/19 09:45		Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	16.2	ug/m3	3.5	1.44		04/17/19 13:32	67-64-1	
Benzene	0.87	ug/m3	0.47	1.44		04/17/19 13:32	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.3	1.44		04/17/19 13:32	78-93-3	
Carbon disulfide	ND	ug/m3	0.91	1.44		04/17/19 13:32	75-15-0	
Dichlorodifluoromethane	2.4	ug/m3	1.5	1.44		04/17/19 13:32	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.44		04/17/19 13:32	75-35-4	
cis-1,2-Dichloroethene	38.8	ug/m3	1.2	1.44		04/17/19 13:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.44		04/17/19 13:32	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.44		04/17/19 13:32	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.6	1.44		04/17/19 13:32	622-96-8	
n-Hexane	ND	ug/m3	1.0	1.44		04/17/19 13:32	110-54-3	
Methylene Chloride	ND	ug/m3	5.1	1.44		04/17/19 13:32	75-09-2	
Tetrachloroethene	196	ug/m3	0.99	1.44		04/17/19 13:32	127-18-4	
Toluene	3.1	ug/m3	1.1	1.44		04/17/19 13:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.44		04/17/19 13:32	71-55-6	
Trichloroethene	8.3	ug/m3	0.79	1.44		04/17/19 13:32	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.4	1.44		04/17/19 13:32	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.4	1.44		04/17/19 13:32	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.4	1.44		04/17/19 13:32	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.37	1.44		04/17/19 13:32	75-01-4	
m&p-Xylene	2.6	ug/m3	2.5	1.44		04/17/19 13:32	179601-23-1	
o-Xylene	2.7	ug/m3	1.3	1.44		04/17/19 13:32	95-47-6	
Sample: IA-Ambient (On the Dock)		Lab ID: 10469665009	Collected:		Received: 04/05/19 09:45		Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	7.5	ug/m3	3.5	1.46		04/17/19 13:58	67-64-1	
Benzene	0.54	ug/m3	0.47	1.46		04/17/19 13:58	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.4	1.46		04/17/19 13:58	78-93-3	
Carbon disulfide	ND	ug/m3	0.92	1.46		04/17/19 13:58	75-15-0	
Dichlorodifluoromethane	2.6	ug/m3	1.5	1.46		04/17/19 13:58	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.46		04/17/19 13:58	75-35-4	

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ANALYTICAL RESULTS

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

Sample: IA-Ambient (On the Dock)	Lab ID: 10469665009	Collected:	Received: 04/05/19 09:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.46		04/17/19 13:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.46		04/17/19 13:58	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.46		04/17/19 13:58	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.6	1.46		04/17/19 13:58	622-96-8	
n-Hexane	ND	ug/m3	1.0	1.46		04/17/19 13:58	110-54-3	
Methylene Chloride	ND	ug/m3	5.2	1.46		04/17/19 13:58	75-09-2	
Tetrachloroethene	ND	ug/m3	1.0	1.46		04/17/19 13:58	127-18-4	
Toluene	1.9	ug/m3	1.1	1.46		04/17/19 13:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.46		04/17/19 13:58	71-55-6	
Trichloroethene	ND	ug/m3	0.80	1.46		04/17/19 13:58	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.5	1.46		04/17/19 13:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.5	1.46		04/17/19 13:58	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.5	1.46		04/17/19 13:58	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.38	1.46		04/17/19 13:58	75-01-4	
m&p-Xylene	ND	ug/m3	2.6	1.46		04/17/19 13:58	179601-23-1	
o-Xylene	ND	ug/m3	1.3	1.46		04/17/19 13:58	95-47-6	

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QUALITY CONTROL DATA

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

QC Batch:	599489	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level
Associated Lab Samples: 10469665001			

METHOD BLANK: 3241160 Matrix: Air

Associated Lab Samples: 10469665001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	04/15/19 09:24	
1,1-Dichloroethene	ug/m3	ND	0.81	04/15/19 09:24	
1,2,4-Trimethylbenzene	ug/m3	ND	1.0	04/15/19 09:24	
1,3,5-Trimethylbenzene	ug/m3	ND	1.0	04/15/19 09:24	
2,2,4-Trimethylpentane	ug/m3	ND	2.4	04/15/19 09:24	N2
2-Butanone (MEK)	ug/m3	ND	3.0	04/15/19 09:24	
4-Ethyltoluene	ug/m3	ND	2.5	04/15/19 09:24	
Acetone	ug/m3	ND	2.4	04/15/19 09:24	
Benzene	ug/m3	ND	0.32	04/15/19 09:24	
Carbon disulfide	ug/m3	ND	0.63	04/15/19 09:24	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	04/15/19 09:24	
Dichlorodifluoromethane	ug/m3	ND	1.0	04/15/19 09:24	
Ethylbenzene	ug/m3	ND	0.88	04/15/19 09:24	
m&p-Xylene	ug/m3	ND	1.8	04/15/19 09:24	
Methylene Chloride	ug/m3	ND	3.5	04/15/19 09:24	
n-Hexane	ug/m3	ND	0.72	04/15/19 09:24	
o-Xylene	ug/m3	ND	0.88	04/15/19 09:24	
Tetrachloroethene	ug/m3	ND	0.69	04/15/19 09:24	
Toluene	ug/m3	ND	0.77	04/15/19 09:24	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	04/15/19 09:24	
Trichloroethene	ug/m3	ND	0.55	04/15/19 09:24	
Vinyl chloride	ug/m3	ND	0.26	04/15/19 09:24	

LABORATORY CONTROL SAMPLE: 3241161

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	57.0	103	70-130	
1,1-Dichloroethene	ug/m3	40.3	30.7	76	70-130	
1,2,4-Trimethylbenzene	ug/m3	50	62.0	124	70-134	
1,3,5-Trimethylbenzene	ug/m3	50	60.9	122	70-132	
2,2,4-Trimethylpentane	ug/m3	47.5	47.5	100	68-138	N2
2-Butanone (MEK)	ug/m3	30	31.8	106	70-130	
4-Ethyltoluene	ug/m3	50	61.6	123	70-138	
Acetone	ug/m3	121	90.9	75	67-130	
Benzene	ug/m3	32.5	32.5	100	70-130	
Carbon disulfide	ug/m3	31.6	23.3	74	56-137	
cis-1,2-Dichloroethene	ug/m3	40.3	42.8	106	70-130	
Dichlorodifluoromethane	ug/m3	50.3	45.5	90	70-130	
Ethylbenzene	ug/m3	44.1	49.9	113	67-131	
m&p-Xylene	ug/m3	88.3	97.0	110	70-132	

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QUALITY CONTROL DATA

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

LABORATORY CONTROL SAMPLE: 3241161

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/m3	177	142	80	65-130	
n-Hexane	ug/m3	35.8	34.3	96	66-130	
o-Xylene	ug/m3	44.1	50.0	113	70-130	
Tetrachloroethene	ug/m3	68.9	71.4	104	70-130	
Toluene	ug/m3	38.3	40.0	104	70-130	
trans-1,2-Dichloroethene	ug/m3	40.3	45.5	113	70-130	
Trichloroethene	ug/m3	54.6	57.8	106	70-130	
Vinyl chloride	ug/m3	26	21.8	84	70-130	

SAMPLE DUPLICATE: 3241937

Parameter	Units	10469550012 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	2.4	2.3	2	25	
1,3,5-Trimethylbenzene	ug/m3	ND	.9J		25	
2,2,4-Trimethylpentane	ug/m3	ND	ND		25 N2	
2-Butanone (MEK)	ug/m3	ND	2.5J		25	
4-Ethyltoluene	ug/m3	ND	ND		25	
Acetone	ug/m3	18.4	18.5	1	25	
Benzene	ug/m3	ND	.29J		25	
Carbon disulfide	ug/m3	ND	ND		25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
Dichlorodifluoromethane	ug/m3	2.0	2.0	5	25	
Ethylbenzene	ug/m3	ND	1.3J		25	
m&p-Xylene	ug/m3	5.3	5.1	3	25	
Methylene Chloride	ug/m3	7.2	7.0	3	25	
n-Hexane	ug/m3	4.3	4.1	6	25	
o-Xylene	ug/m3	3.1	3.0	4	25	
Tetrachloroethene	ug/m3	ND	1.1J		25	
Toluene	ug/m3	16.2	15.8	3	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	1.2	1.0	13	25	
Vinyl chloride	ug/m3	ND	ND		25	

SAMPLE DUPLICATE: 3241938

Parameter	Units	10469550014 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	5.8	6.0	3	25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	1.8	1.8	4	25	
1,3,5-Trimethylbenzene	ug/m3	ND	.74J		25	
2,2,4-Trimethylpentane	ug/m3	ND	ND		25 N2	
2-Butanone (MEK)	ug/m3	ND	.58J		25	

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QUALITY CONTROL DATA

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

SAMPLE DUPLICATE: 3241938

Parameter	Units	10469550014 Result	Dup Result	RPD	Max RPD	Qualifiers
4-Ethyltoluene	ug/m ³	ND	ND		25	
Acetone	ug/m ³	19.1	19.2	0	25	
Benzene	ug/m ³	ND	.33J		25	
Carbon disulfide	ug/m ³	ND	ND		25	
cis-1,2-Dichloroethene	ug/m ³	ND	ND		25	
Dichlorodifluoromethane	ug/m ³	1.8	1.9	7	25	
Ethylbenzene	ug/m ³	ND	.9J		25	
m&p-Xylene	ug/m ³	3.4	3.6	4	25	
Methylene Chloride	ug/m ³	ND	2.7J		25	
n-Hexane	ug/m ³	ND	1J		25	
o-Xylene	ug/m ³	2.1	2.3	6	25	
Tetrachloroethene	ug/m ³	12.3	13.1	7	25	
Toluene	ug/m ³	5.0	5.3	5	25	
trans-1,2-Dichloroethene	ug/m ³	ND	ND		25	
Trichloroethene	ug/m ³	ND	.46J		25	
Vinyl chloride	ug/m ³	ND	ND		25	

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QUALITY CONTROL DATA

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

QC Batch:	600032	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level
Associated Lab Samples:	10469665002, 10469665003, 10469665004, 10469665005, 10469665006		

METHOD BLANK: 3243705 Matrix: Air

Associated Lab Samples: 10469665002, 10469665003, 10469665004, 10469665005, 10469665006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.56	04/17/19 09:29	
1,1-Dichloroethene	ug/m3	ND	0.40	04/17/19 09:29	
1,2,4-Trimethylbenzene	ug/m3	ND	0.50	04/17/19 09:29	
1,3,5-Trimethylbenzene	ug/m3	ND	0.50	04/17/19 09:29	
2,2,4-Trimethylpentane	ug/m3	ND	1.2	04/17/19 09:29	N2
2-Butanone (MEK)	ug/m3	ND	1.5	04/17/19 09:29	
4-Ethyltoluene	ug/m3	ND	1.2	04/17/19 09:29	
Acetone	ug/m3	ND	1.2	04/17/19 09:29	
Benzene	ug/m3	ND	0.16	04/17/19 09:29	
Carbon disulfide	ug/m3	ND	0.32	04/17/19 09:29	
cis-1,2-Dichloroethene	ug/m3	ND	0.40	04/17/19 09:29	
Dichlorodifluoromethane	ug/m3	ND	0.50	04/17/19 09:29	
Ethylbenzene	ug/m3	ND	0.44	04/17/19 09:29	
m&p-Xylene	ug/m3	ND	0.88	04/17/19 09:29	
Methylene Chloride	ug/m3	ND	1.8	04/17/19 09:29	
n-Hexane	ug/m3	ND	0.36	04/17/19 09:29	
o-Xylene	ug/m3	ND	0.44	04/17/19 09:29	
Tetrachloroethene	ug/m3	ND	0.34	04/17/19 09:29	
Toluene	ug/m3	ND	0.38	04/17/19 09:29	
trans-1,2-Dichloroethene	ug/m3	ND	0.40	04/17/19 09:29	
Trichloroethene	ug/m3	ND	0.27	04/17/19 09:29	
Vinyl chloride	ug/m3	ND	0.13	04/17/19 09:29	

LABORATORY CONTROL SAMPLE: 3243706

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	59.4	107	70-130	
1,1-Dichloroethene	ug/m3	40.3	38.9	97	70-130	
1,2,4-Trimethylbenzene	ug/m3	50	60.0	120	70-134	
1,3,5-Trimethylbenzene	ug/m3	50	58.5	117	70-132	
2,2,4-Trimethylpentane	ug/m3	47.5	46.7	98	68-138	N2
2-Butanone (MEK)	ug/m3	30	29.8	100	70-130	
4-Ethyltoluene	ug/m3	50	59.6	119	70-138	
Acetone	ug/m3	121	106	87	67-130	
Benzene	ug/m3	32.5	31.2	96	70-130	
Carbon disulfide	ug/m3	31.6	32.6	103	56-137	
cis-1,2-Dichloroethene	ug/m3	40.3	41.8	104	70-130	
Dichlorodifluoromethane	ug/m3	50.3	51.2	102	70-130	
Ethylbenzene	ug/m3	44.1	50.0	113	67-131	
m&p-Xylene	ug/m3	88.3	99.7	113	70-132	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

LABORATORY CONTROL SAMPLE: 3243706

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/m3	177	163	92	65-130	
n-Hexane	ug/m3	35.8	33.8	94	66-130	
o-Xylene	ug/m3	44.1	49.7	113	70-130	
Tetrachloroethene	ug/m3	68.9	70.4	102	70-130	
Toluene	ug/m3	38.3	40.6	106	70-130	
trans-1,2-Dichloroethene	ug/m3	40.3	39.5	98	70-130	
Trichloroethene	ug/m3	54.6	57.2	105	70-130	
Vinyl chloride	ug/m3	26	25.7	99	70-130	

SAMPLE DUPLICATE: 3244843

Parameter	Units	10468522005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	ND	ND		25	
2,2,4-Trimethylpentane	ug/m3	ND	ND		25 N2	
2-Butanone (MEK)	ug/m3	ND	ND		25	
4-Ethyltoluene	ug/m3	ND	ND		25	
Acetone	ug/m3	4.1	4.8	15	25	
Benzene	ug/m3	ND	.51J		25	
Carbon disulfide	ug/m3	ND	ND		25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
Dichlorodifluoromethane	ug/m3	2.0	2.3	15	25	
Ethylbenzene	ug/m3	ND	ND		25	
m&p-Xylene	ug/m3	ND	ND		25	
Methylene Chloride	ug/m3	ND	2.8J		25	
n-Hexane	ug/m3	ND	.56J		25	
o-Xylene	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	ND	ND		25	
Toluene	ug/m3	ND	ND		25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		25	

SAMPLE DUPLICATE: 3244844

Parameter	Units	10468522007 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	5.3	5.0	5	25	
1,3,5-Trimethylbenzene	ug/m3	1.8	2.0	6	25	
2,2,4-Trimethylpentane	ug/m3	ND	1.9J		25 N2	
2-Butanone (MEK)	ug/m3	9.7	9.1	7	25	

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QUALITY CONTROL DATA

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

SAMPLE DUPLICATE: 3244844

Parameter	Units	10468522007 Result	Dup Result	RPD	Max RPD	Qualifiers
4-Ethyltoluene	ug/m ³	ND	1.9J		25	
Acetone	ug/m ³	167	156	7	25	
Benzene	ug/m ³	1.5	1.4	7	25	
Carbon disulfide	ug/m ³	ND	ND		25	
cis-1,2-Dichloroethene	ug/m ³	ND	ND		25	
Dichlorodifluoromethane	ug/m ³	2.8	2.7	4	25	
Ethylbenzene	ug/m ³	17.3	16.6	4	25	
m&p-Xylene	ug/m ³	69.3	67.6	3	25	
Methylene Chloride	ug/m ³	ND	5.1J		25	
n-Hexane	ug/m ³	3.0	2.8	5	25	
o-Xylene	ug/m ³	16.0	15.5	3	25	
Tetrachloroethene	ug/m ³	ND	ND		25	
Toluene	ug/m ³	90.2	88.3	2	25	
trans-1,2-Dichloroethene	ug/m ³	ND	ND		25	
Trichloroethene	ug/m ³	ND	.49J		25	
Vinyl chloride	ug/m ³	ND	ND		25	

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QUALITY CONTROL DATA

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

QC Batch:	600050	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level
Associated Lab Samples: 10469665007, 10469665008, 10469665009			

METHOD BLANK: 3243792 Matrix: Air

Associated Lab Samples: 10469665007, 10469665008, 10469665009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	04/17/19 08:33	
1,1-Dichloroethene	ug/m3	ND	0.81	04/17/19 08:33	
1,2,4-Trimethylbenzene	ug/m3	ND	1.0	04/17/19 08:33	
1,3,5-Trimethylbenzene	ug/m3	ND	1.0	04/17/19 08:33	
2,2,4-Trimethylpentane	ug/m3	ND	2.4	04/17/19 08:33	N2
2-Butanone (MEK)	ug/m3	ND	3.0	04/17/19 08:33	
4-Ethyltoluene	ug/m3	ND	2.5	04/17/19 08:33	
Acetone	ug/m3	ND	2.4	04/17/19 08:33	
Benzene	ug/m3	ND	0.32	04/17/19 08:33	
Carbon disulfide	ug/m3	ND	0.63	04/17/19 08:33	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	04/17/19 08:33	
Dichlorodifluoromethane	ug/m3	ND	1.0	04/17/19 08:33	
Ethylbenzene	ug/m3	ND	0.88	04/17/19 08:33	
m&p-Xylene	ug/m3	ND	1.8	04/17/19 08:33	
Methylene Chloride	ug/m3	ND	3.5	04/17/19 08:33	
n-Hexane	ug/m3	ND	0.72	04/17/19 08:33	
o-Xylene	ug/m3	ND	0.88	04/17/19 08:33	
Tetrachloroethene	ug/m3	ND	0.69	04/17/19 08:33	
Toluene	ug/m3	ND	0.77	04/17/19 08:33	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	04/17/19 08:33	
Trichloroethene	ug/m3	ND	0.55	04/17/19 08:33	
Vinyl chloride	ug/m3	ND	0.26	04/17/19 08:33	

LABORATORY CONTROL SAMPLE: 3243793

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	61.8	111	70-130	
1,1-Dichloroethene	ug/m3	40.3	43.2	107	70-130	
1,2,4-Trimethylbenzene	ug/m3	50	56.6	113	70-134	
1,3,5-Trimethylbenzene	ug/m3	50	56.1	112	70-132	
2,2,4-Trimethylpentane	ug/m3	47.5	50.9	107	68-138	N2
2-Butanone (MEK)	ug/m3	30	27.1	90	70-130	
4-Ethyltoluene	ug/m3	50	57.6	115	70-138	
Acetone	ug/m3	121	110	91	67-130	
Benzene	ug/m3	32.5	35.5	109	70-130	
Carbon disulfide	ug/m3	31.6	34.9	110	56-137	
cis-1,2-Dichloroethene	ug/m3	40.3	43.7	108	70-130	
Dichlorodifluoromethane	ug/m3	50.3	55.4	110	70-130	
Ethylbenzene	ug/m3	44.1	48.8	111	67-131	
m&p-Xylene	ug/m3	88.3	97.9	111	70-132	

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QUALITY CONTROL DATA

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

LABORATORY CONTROL SAMPLE: 3243793

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/m3	177	183	104	65-130	
n-Hexane	ug/m3	35.8	39.3	110	66-130	
o-Xylene	ug/m3	44.1	48.8	111	70-130	
Tetrachloroethene	ug/m3	68.9	75.5	110	70-130	
Toluene	ug/m3	38.3	42.5	111	70-130	
trans-1,2-Dichloroethene	ug/m3	40.3	43.1	107	70-130	
Trichloroethene	ug/m3	54.6	56.8	104	70-130	
Vinyl chloride	ug/m3	26	27.6	106	70-130	

SAMPLE DUPLICATE: 3243970

Parameter	Units	10469665007 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	ND	ND		25	
2,2,4-Trimethylpentane	ug/m3	ND	ND		25 N2	
2-Butanone (MEK)	ug/m3	ND	1.6J		25	
4-Ethyltoluene	ug/m3	ND	ND		25	
Acetone	ug/m3	16.7	16.9	1	25	
Benzene	ug/m3	0.88	0.84	4	25	
Carbon disulfide	ug/m3	ND	ND		25	
cis-1,2-Dichloroethene	ug/m3	38.6	38.2	1	25	
Dichlorodifluoromethane	ug/m3	2.5	2.5	1	25	
Ethylbenzene	ug/m3	ND	.55J		25	
m&p-Xylene	ug/m3	ND	2.7		25	
Methylene Chloride	ug/m3	ND	3.9J		25	
n-Hexane	ug/m3	ND	ND		25	
o-Xylene	ug/m3	3.3	3.2	2	25	
Tetrachloroethene	ug/m3	183	184	1	25	
Toluene	ug/m3	2.6	2.6	0	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	8.3	8.2	1	25	
Vinyl chloride	ug/m3	0.59	ND		25	

SAMPLE DUPLICATE: 3243971

Parameter	Units	10469665009 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	ND	ND		25	
2,2,4-Trimethylpentane	ug/m3	ND	ND		25 N2	
2-Butanone (MEK)	ug/m3	ND	1.7J		25	

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QUALITY CONTROL DATA

Project: 2331 E-Market St LLC

Pace Project No.: 10469665

SAMPLE DUPLICATE: 3243971

Parameter	Units	10469665009 Result	Dup Result	RPD	Max RPD	Qualifiers
4-Ethyltoluene	ug/m ³	ND	ND		25	
Acetone	ug/m ³	7.5	7.7	2	25	
Benzene	ug/m ³	0.54	0.55	2	25	
Carbon disulfide	ug/m ³	ND	ND		25	
cis-1,2-Dichloroethene	ug/m ³	ND	ND		25	
Dichlorodifluoromethane	ug/m ³	2.6	2.8	7	25	
Ethylbenzene	ug/m ³	ND	ND		25	
m&p-Xylene	ug/m ³	ND	ND		25	
Methylene Chloride	ug/m ³	ND	2.9J		25	
n-Hexane	ug/m ³	ND	.6J		25	
o-Xylene	ug/m ³	ND	ND		25	
Tetrachloroethene	ug/m ³	ND	.74J		25	
Toluene	ug/m ³	1.9	1.8	1	25	
trans-1,2-Dichloroethene	ug/m ³	ND	ND		25	
Trichloroethene	ug/m ³	ND	ND		25	
Vinyl chloride	ug/m ³	ND	ND		25	

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QUALIFIERS

Project: 2331 E-Market St LLC
Pace Project No.: 10469665

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2331 E-Market St LLC
Pace Project No.: 10469665

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10469665001	IA-001 (Pump Room)	TO-15	599489		
10469665002	IA-002 (G Middle Room)	TO-15	600032		
10469665003	IA-003 (Below Dock)	TO-15	600032		
10469665004	IA-004 (Suite H2)	TO-15	600032		
10469665005	IA-005 (R.R)	TO-15	600032		
10469665006	IA-006 (Vault)	TO-15	600032		
10469665007	IA-007 (H3-Yoga)	TO-15	600050		
10469665008	IA-008 (W15)	TO-15	600050		
10469665009	IA-Ambient (On the Dock)	TO-15	600050		

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AIR: CHAIN-OF-CUSTODY /

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant

104000665
10409655

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:																																																																																																																																																													
Company: SARVA BIOPREMED, LLC	Report To: Copy To: STEVE VEDDER.	Project Name: 2331 E-Market St LLC	Attention: Address: 25 MARIANNE DRIVE, YORK, PA 17406	Pace Quote Reference: 1036034	Pace Project Manager/Sales Rep. 38634																																																																																																																																																												
Purchase Order No.: 419-710-5831	Phone: 717-934-5831	Project Number: 2331 E-Market St LLC	Pace Profile #: 38634																																																																																																																																																														
Requested Due Date/AT: 2011-04-06	Fax: 717-934-5831																																																																																																																																																																
<p>'Section D Required Client Information</p> <p>AIR SAMPLE ID Sample IDs MUST BE UNIQUE</p> <table border="1"> <thead> <tr> <th>#</th> <th>ITEM</th> <th>Value</th> <th>Media Codes</th> <th>Code</th> <th>Media Code</th> <th>PID Readings (Clear out)</th> <th>Final Field - In HG</th> <th>Calibrator Field - In HG</th> <th>Summa Can Number</th> <th>Flow Control Number</th> <th>Method:</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>IA-001 (Pump Room)</td> <td></td> <td>TB</td> <td></td> <td></td> <td>4/4/19 8:00</td> <td>4/4/19 4:30</td> <td>30/04</td> <td>36481</td> <td>856</td> <td>Pace Lab ID <i>SL-105</i></td> </tr> <tr> <td>2</td> <td>IA-002 (G Middle Room)</td> <td></td> <td>1L Summa Can</td> <td>1LC</td> <td></td> <td></td> <td></td> <td>30/04</td> <td>36460</td> <td>121</td> <td></td> </tr> <tr> <td>3</td> <td>IA-003 (Below Deck)</td> <td></td> <td>6 Liter Summa Can</td> <td>6LC</td> <td></td> <td></td> <td></td> <td>30/04</td> <td>36460</td> <td>1252</td> <td></td> </tr> <tr> <td>4</td> <td>IA-004 (Sulfur H2)</td> <td></td> <td>Low Volume Puff</td> <td>LVP</td> <td></td> <td></td> <td></td> <td>30/04</td> <td>2764</td> <td>6186</td> <td></td> </tr> <tr> <td>5</td> <td>IA-005 (K-Roll)</td> <td></td> <td>High Volume Puff</td> <td>HVP</td> <td></td> <td></td> <td></td> <td>28/04</td> <td>1071</td> <td>1269</td> <td></td> </tr> <tr> <td>6</td> <td>IA-006 (Vomit)</td> <td></td> <td>PM10</td> <td></td> <td></td> <td></td> <td></td> <td>27/22</td> <td>1050</td> <td>1800</td> <td></td> </tr> <tr> <td>7</td> <td>IA-007 (H3 - Yoga)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>30/10</td> <td>3551</td> <td>1672</td> <td></td> </tr> <tr> <td>8</td> <td>IA-008 (WIS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>30/02</td> <td>1199</td> <td>0439</td> <td></td> </tr> <tr> <td>9</td> <td>IA-AMBIENT (On the Dock)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>30/01</td> <td>1222</td> <td>0766</td> <td></td> </tr> <tr> <td>10</td> <td></td> </tr> <tr> <td>11</td> <td></td> </tr> <tr> <td>12</td> <td></td> </tr> </tbody> </table>						#	ITEM	Value	Media Codes	Code	Media Code	PID Readings (Clear out)	Final Field - In HG	Calibrator Field - In HG	Summa Can Number	Flow Control Number	Method:	1	IA-001 (Pump Room)		TB			4/4/19 8:00	4/4/19 4:30	30/04	36481	856	Pace Lab ID <i>SL-105</i>	2	IA-002 (G Middle Room)		1L Summa Can	1LC				30/04	36460	121		3	IA-003 (Below Deck)		6 Liter Summa Can	6LC				30/04	36460	1252		4	IA-004 (Sulfur H2)		Low Volume Puff	LVP				30/04	2764	6186		5	IA-005 (K-Roll)		High Volume Puff	HVP				28/04	1071	1269		6	IA-006 (Vomit)		PM10					27/22	1050	1800		7	IA-007 (H3 - Yoga)							30/10	3551	1672		8	IA-008 (WIS)							30/02	1199	0439		9	IA-AMBIENT (On the Dock)							30/01	1222	0766		10												11												12											
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5	IA-005 (K-Roll)		High Volume Puff	HVP				28/04	1071	1269																																																																																																																																																							
6	IA-006 (Vomit)		PM10					27/22	1050	1800																																																																																																																																																							
7	IA-007 (H3 - Yoga)							30/10	3551	1672																																																																																																																																																							
8	IA-008 (WIS)							30/02	1199	0439																																																																																																																																																							
9	IA-AMBIENT (On the Dock)							30/01	1222	0766																																																																																																																																																							
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RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION																																																																																																																																																													
Satya Ganti Dave Holloman		4/4/19	7:00	Reeve 4/4/19 Jeff Pelegas 4/4/19																																																																																																																																																													
SAMPLE CONDITIONS																																																																																																																																																																	
Temp in °C	V/N	V/N	V/N	V/N	V/N																																																																																																																																																												
Received on	V/N	V/N	V/N	V/N	V/N																																																																																																																																																												
Custody Coder	V/N	V/N	V/N	V/N	V/N																																																																																																																																																												
Samples intact	V/N	V/N	V/N	V/N	V/N																																																																																																																																																												



Document Name:
Air Sample Condition Upon Receipt
Document No.:
F-MN-A-106-rev.18

Document Revised: 31Jan2019

Page 1 of 1

Issuing Authority:

WO# : 10469665

PM: NB3 Due Date: 04/12/19
CLIENT: Sarva Bio

Air Sample Condition
Upon Receipt

Client Name: SARVA

Project #:

Courier: Fed Ex UPS USPS Client
 Pace SpeeDee Commercial See Exception

Tracking Number: 7604602592041921519190 Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes NoPacking Material: Bubble Wrap Bubble Bags Foam None Tin Can Other: _____ Temp Blank rec: Yes No

Temp. (TO17 and TO13 samples only) (°C): _____ Corrected Temp (°C): _____

Thermometer Used: G87A9170600254
 G87A9155100842

Temp should be above freezing to 6°C Correction Factor: _____

Date & Initials of Person Examining Contents: 04/08/19 CS

Type of ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name and/or Signature on COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Media: <input checked="" type="checkbox"/> Air Can <input type="checkbox"/> Airbag <input type="checkbox"/> Filter TDT Passive	11. Individually Certified Cans Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (list which samples)	
Is sufficient information available to reconcile samples to the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples 6 and 7 have no sample information
Do cans need to be pressurized (3C and ASTM 1946 DO NOT PRESSURIZE)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. overfiller No date/time on can tags or COC tags 13. For Samples 2-9 matched by can ID

Samples Received:

Pressure Gauge # 10AIR34 10AIR35

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
1	3648	1856	-1.0	+6.0	Ambient	1222	0766	-2.5	+5.0
2	3696	0121	-1.5	"					
3	2108	1252	-1.5	"					
4	2764	0286	-2.0	"					
5	1074	1249	0.0	"					
6	1050	1800	-19.0	"					
7	3551	1612	-2.5	"					
8	1199	0434	-2.0	"					

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Dathan Roberson

Date: 4/5/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

April 29, 2019

Steve Vedder
Environmental Products & Services of Vermont,
Inc.
1539 Bobali Drive
Harrisburg, PA 17104

RE: Project: 2331 E MAIN ST
Pace Project No.: 10471486

Dear Steve Vedder:

Enclosed are the analytical results for sample(s) received by the laboratory on April 19, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nathan Boberg
nathan.boberg@pacelabs.com
(612)360-0728
Project Manager

Enclosures

cc: Satya Ganti, Sarva Bio Remed, LLC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2331 E MAIN ST
 Pace Project No.: 10471486

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
 A2LA Certification #: 2926.01
 Alabama Certification #: 40770
 Alaska Contaminated Sites Certification #: 17-009
 Alaska DW Certification #: MN00064
 Arizona Certification #: AZ0014
 Arkansas DW Certification #: MN00064
 Arkansas WW Certification #: 88-0680
 California Certification #: 2929
 CNMI Saipan Certification #: MP0003
 Colorado Certification #: MN00064
 Connecticut Certification #: PH-0256
 EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
 Florida Certification #: E87605
 Georgia Certification #: 959
 Guam EPA Certification #: MN00064
 Hawaii Certification #: MN00064
 Idaho Certification #: MN00064
 Illinois Certification #: 200011
 Indiana Certification #: C-MN-01
 Iowa Certification #: 368
 Kansas Certification #: E-10167
 Kentucky DW Certification #: 90062
 Kentucky WW Certification #: 90062
 Louisiana DEQ Certification #: 03086
 Louisiana DW Certification #: MN00064
 Maine Certification #: MN00064
 Maryland Certification #: 322
 Massachusetts Certification #: M-MN064
 Michigan Certification #: 9909
 Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137
 Minnesota Petrofund Certification #: 1240
 Mississippi Certification #: MN00064
 Missouri Certification #: 10100
 Montana Certification #: CERT0092
 Nebraska Certification #: NE-OS-18-06
 Nevada Certification #: MN00064
 New Hampshire Certification #: 2081
 New Jersey Certification #: MN002
 New York Certification #: 11647
 North Carolina DW Certification #: 27700
 North Carolina WW Certification #: 530
 North Dakota Certification #: R-036
 Ohio DW Certification #: 41244
 Ohio VAP Certification #: CL101
 Oklahoma Certification #: 9507
 Oregon Primary Certification #: MN300001
 Oregon Secondary Certification #: MN200001
 Pennsylvania Certification #: 68-00563
 Puerto Rico Certification #: MN00064
 South Carolina Certification #: 74003001
 Tennessee Certification #: TN02818
 Texas Certification #: T104704192
 Utah Certification #: MN00064
 Vermont Certification #: VT-027053137
 Virginia Certification #: 460163
 Washington Certification #: C486
 West Virginia DEP Certification #: 382
 West Virginia DW Certification #: 9952 C
 Wisconsin Certification #: 999407970
 Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2331 E MAIN ST
 Pace Project No.: 10471486

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10471486001	IA-001 (PUMP ROOM)	Air	04/18/19 16:00	04/19/19 08:45
10471486002	IA-AMBIENT (ON DOCK)	Air	04/18/19 16:00	04/19/19 08:45
10471486003	IA-009 (F-Warehouse)	Air	04/18/19 16:00	04/19/19 08:45
10471486004	IA-010 (D-Jeweler Sho)	Air	04/18/19 16:00	04/19/19 08:45
10471486005	IA-011 (Rest Room-B)	Air	04/18/19 16:00	04/19/19 08:45
10471486006	IA-012 (C-Clothing Store)	Air	04/18/19 16:00	04/19/19 08:45
10471486007	IA-013 (A-Be Balnced)	Air	04/18/19 16:00	04/19/19 08:45

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SAMPLE ANALYTE COUNT

Project: 2331 E MAIN ST
Pace Project No.: 10471486

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10471486001	IA-001 (PUMP ROOM)	TO-15	MG2	22
10471486002	IA-AMBIENT (ON DOCK)	TO-15	MG2	22
10471486003	IA-009 (F-Warehouse)	TO-15	MG2	22
10471486004	IA-010 (D-Jeweler Sho)	TO-15	MJL	22
10471486005	IA-011 (Rest Room-B)	TO-15	MJL	22
10471486006	IA-012 (C-Clothing Store)	TO-15	MJL	22

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2331 E MAIN ST
Pace Project No.: 10471486

Method: TO-15
Description: TO15 MSV AIR
Client: Sarva Bio Remed, LLC
Date: April 29, 2019

General Information:

6 samples were analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 601509

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3250728)
 - 2,2,4-Trimethylpentane
- DUP (Lab ID: 3252255)
 - 2,2,4-Trimethylpentane
- DUP (Lab ID: 3252256)
 - 2,2,4-Trimethylpentane
- IA-001 (PUMP ROOM) (Lab ID: 10471486001)
 - 2,2,4-Trimethylpentane
- IA-009 (F-Warehouse) (Lab ID: 10471486003)
 - 2,2,4-Trimethylpentane
- IA-AMBIENT (ON DOCK) (Lab ID: 10471486002)
 - 2,2,4-Trimethylpentane

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2331 E MAIN ST
Pace Project No.: 10471486

Method: TO-15

Description: TO15 MSV AIR

Client: Sarva Bio Remed, LLC

Date: April 29, 2019

Analyte Comments:

QC Batch: 601509

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- LCS (Lab ID: 3250729)
- 2,2,4-Trimethylpentane

QC Batch: 601789

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3252677)
- 2,2,4-Trimethylpentane
- IA-010 (D-Jeweler Sho) (Lab ID: 10471486004)
- 2,2,4-Trimethylpentane
- IA-011 (Rest Room-B) (Lab ID: 10471486005)
- 2,2,4-Trimethylpentane
- IA-012 (C-Clothing Store) (Lab ID: 10471486006)
- 2,2,4-Trimethylpentane
- LCS (Lab ID: 3252678)
- 2,2,4-Trimethylpentane

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2331 E MAIN ST
Pace Project No.: 10471486

Sample: IA-001 (PUMP ROOM)	Lab ID: 10471486001	Collected: 04/18/19 16:00	Received: 04/19/19 08:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	20.9	ug/m3	3.4	1.41		04/24/19 19:45	67-64-1	
Benzene	ND	ug/m3	0.46	1.41		04/24/19 19:45	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.2	1.41		04/24/19 19:45	78-93-3	
Carbon disulfide	ND	ug/m3	0.89	1.41		04/24/19 19:45	75-15-0	
Dichlorodifluoromethane	2.5	ug/m3	1.4	1.41		04/24/19 19:45	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.1	1.41		04/24/19 19:45	75-35-4	
cis-1,2-Dichloroethene	57.6	ug/m3	1.1	1.41		04/24/19 19:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.1	1.41		04/24/19 19:45	156-60-5	
Ethylbenzene	ND	ug/m3	1.2	1.41		04/24/19 19:45	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.5	1.41		04/24/19 19:45	622-96-8	
n-Hexane	1.2	ug/m3	1.0	1.41		04/24/19 19:45	110-54-3	
Methylene Chloride	7.4	ug/m3	5.0	1.41		04/24/19 19:45	75-09-2	
Tetrachloroethene	273	ug/m3	0.97	1.41		04/24/19 19:45	127-18-4	
Toluene	1.3	ug/m3	1.1	1.41		04/24/19 19:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.41		04/24/19 19:45	71-55-6	
Trichloroethene	11.2	ug/m3	0.77	1.41		04/24/19 19:45	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.4	1.41		04/24/19 19:45	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.4	1.41		04/24/19 19:45	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.3	1.41		04/24/19 19:45	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.37	1.41		04/24/19 19:45	75-01-4	
m&p-Xylene	ND	ug/m3	2.5	1.41		04/24/19 19:45	179601-23-1	
o-Xylene	1.3	ug/m3	1.2	1.41		04/24/19 19:45	95-47-6	

Sample: IA-AMBIENT (ON DOCK)	Lab ID: 10471486002	Collected: 04/18/19 16:00	Received: 04/19/19 08:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	8.3	ug/m3	3.7	1.55		04/24/19 20:46	67-64-1	
Benzene	ND	ug/m3	0.50	1.55		04/24/19 20:46	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.6	1.55		04/24/19 20:46	78-93-3	
Carbon disulfide	ND	ug/m3	0.98	1.55		04/24/19 20:46	75-15-0	
Dichlorodifluoromethane	2.2	ug/m3	1.6	1.55		04/24/19 20:46	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.55		04/24/19 20:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		04/24/19 20:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		04/24/19 20:46	156-60-5	
Ethylbenzene	ND	ug/m3	1.4	1.55		04/24/19 20:46	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.9	1.55		04/24/19 20:46	622-96-8	
n-Hexane	ND	ug/m3	1.1	1.55		04/24/19 20:46	110-54-3	
Methylene Chloride	ND	ug/m3	5.5	1.55		04/24/19 20:46	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.55		04/24/19 20:46	127-18-4	
Toluene	ND	ug/m3	1.2	1.55		04/24/19 20:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.55		04/24/19 20:46	71-55-6	
Trichloroethene	ND	ug/m3	0.85	1.55		04/24/19 20:46	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.5	1.55		04/24/19 20:46	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.5	1.55		04/24/19 20:46	108-67-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2331 E MAIN ST

Pace Project No.: 10471486

Sample: IA-AMBIENT (ON DOCK)		Lab ID: 10471486002	Collected: 04/18/19 16:00	Received: 04/19/19 08:45	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
2,2,4-Trimethylpentane	ND	ug/m3	3.7	1.55		04/24/19 20:46	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.40	1.55		04/24/19 20:46	75-01-4	
m&p-Xylene	ND	ug/m3	2.7	1.55		04/24/19 20:46	179601-23-1	
o-Xylene	ND	ug/m3	1.4	1.55		04/24/19 20:46	95-47-6	
Sample: IA-009 (F-Warehouse)		Lab ID: 10471486003	Collected: 04/18/19 16:00	Received: 04/19/19 08:45	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	32.0	ug/m3	5.4	2.24		04/24/19 21:48	67-64-1	
Benzene	ND	ug/m3	0.73	2.24		04/24/19 21:48	71-43-2	
2-Butanone (MEK)	ND	ug/m3	6.7	2.24		04/24/19 21:48	78-93-3	
Carbon disulfide	ND	ug/m3	1.4	2.24		04/24/19 21:48	75-15-0	
Dichlorodifluoromethane	2.4	ug/m3	2.3	2.24		04/24/19 21:48	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.8	2.24		04/24/19 21:48	75-35-4	
cis-1,2-Dichloroethene	14.1	ug/m3	1.8	2.24		04/24/19 21:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.8	2.24		04/24/19 21:48	156-60-5	
Ethylbenzene	ND	ug/m3	2.0	2.24		04/24/19 21:48	100-41-4	
4-Ethyltoluene	ND	ug/m3	5.6	2.24		04/24/19 21:48	622-96-8	
n-Hexane	ND	ug/m3	1.6	2.24		04/24/19 21:48	110-54-3	
Methylene Chloride	ND	ug/m3	7.9	2.24		04/24/19 21:48	75-09-2	
Tetrachloroethene	75.2	ug/m3	1.5	2.24		04/24/19 21:48	127-18-4	
Toluene	ND	ug/m3	1.7	2.24		04/24/19 21:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	2.5	2.24		04/24/19 21:48	71-55-6	
Trichloroethene	2.8	ug/m3	1.2	2.24		04/24/19 21:48	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	2.2	2.24		04/24/19 21:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	2.2	2.24		04/24/19 21:48	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	5.3	2.24		04/24/19 21:48	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.58	2.24		04/24/19 21:48	75-01-4	
m&p-Xylene	ND	ug/m3	4.0	2.24		04/24/19 21:48	179601-23-1	
o-Xylene	ND	ug/m3	2.0	2.24		04/24/19 21:48	95-47-6	
Sample: IA-010 (D-Jeweler Sho)		Lab ID: 10471486004	Collected: 04/18/19 16:00	Received: 04/19/19 08:45	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	133	ug/m3	3.5	1.46		04/25/19 21:02	67-64-1	
Benzene	0.50	ug/m3	0.47	1.46		04/25/19 21:02	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.4	1.46		04/25/19 21:02	78-93-3	
Carbon disulfide	ND	ug/m3	0.92	1.46		04/25/19 21:02	75-15-0	
Dichlorodifluoromethane	2.2	ug/m3	1.5	1.46		04/25/19 21:02	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.46		04/25/19 21:02	75-35-4	

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ANALYTICAL RESULTS

Project: 2331 E MAIN ST
Pace Project No.: 10471486

Sample: IA-010 (D-Jeweler Sho)	Lab ID: 10471486004	Collected: 04/18/19 16:00	Received: 04/19/19 08:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
cis-1,2-Dichloroethene	1.4	ug/m3	1.2	1.46		04/25/19 21:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.46		04/25/19 21:02	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.46		04/25/19 21:02	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.6	1.46		04/25/19 21:02	622-96-8	
n-Hexane	ND	ug/m3	1.0	1.46		04/25/19 21:02	110-54-3	
Methylene Chloride	ND	ug/m3	5.2	1.46		04/25/19 21:02	75-09-2	
Tetrachloroethene	7.7	ug/m3	1.0	1.46		04/25/19 21:02	127-18-4	
Toluene	2.4	ug/m3	1.1	1.46		04/25/19 21:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.46		04/25/19 21:02	71-55-6	
Trichloroethene	ND	ug/m3	0.80	1.46		04/25/19 21:02	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.5	1.46		04/25/19 21:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.5	1.46		04/25/19 21:02	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.5	1.46		04/25/19 21:02	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.38	1.46		04/25/19 21:02	75-01-4	
m&p-Xylene	ND	ug/m3	2.6	1.46		04/25/19 21:02	179601-23-1	
o-Xylene	ND	ug/m3	1.3	1.46		04/25/19 21:02	95-47-6	
Sample: IA-011 (Rest Room-B)	Lab ID: 10471486005	Collected: 04/18/19 16:00	Received: 04/19/19 08:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	42.8	ug/m3	3.5	1.44		04/25/19 21:32	67-64-1	
Benzene	0.54	ug/m3	0.47	1.44		04/25/19 21:32	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.3	1.44		04/25/19 21:32	78-93-3	
Carbon disulfide	ND	ug/m3	0.91	1.44		04/25/19 21:32	75-15-0	
Dichlorodifluoromethane	2.3	ug/m3	1.5	1.44		04/25/19 21:32	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.44		04/25/19 21:32	75-35-4	
cis-1,2-Dichloroethene	7.0	ug/m3	1.2	1.44		04/25/19 21:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.44		04/25/19 21:32	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.44		04/25/19 21:32	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.6	1.44		04/25/19 21:32	622-96-8	
n-Hexane	3.5	ug/m3	1.0	1.44		04/25/19 21:32	110-54-3	
Methylene Chloride	19.5	ug/m3	5.1	1.44		04/25/19 21:32	75-09-2	
Tetrachloroethene	39.8	ug/m3	0.99	1.44		04/25/19 21:32	127-18-4	
Toluene	3.0	ug/m3	1.1	1.44		04/25/19 21:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.44		04/25/19 21:32	71-55-6	
Trichloroethene	1.9	ug/m3	0.79	1.44		04/25/19 21:32	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.4	1.44		04/25/19 21:32	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.4	1.44		04/25/19 21:32	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.4	1.44		04/25/19 21:32	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.37	1.44		04/25/19 21:32	75-01-4	
m&p-Xylene	ND	ug/m3	2.5	1.44		04/25/19 21:32	179601-23-1	
o-Xylene	ND	ug/m3	1.3	1.44		04/25/19 21:32	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2331 E MAIN ST
Pace Project No.: 10471486

Sample: IA-012 (C-Clothing Store)	Lab ID: 10471486006	Collected: 04/18/19 16:00	Received: 04/19/19 08:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	44.2	ug/m3	3.5	1.46		04/25/19 22:01	67-64-1	
Benzene	ND	ug/m3	0.47	1.46		04/25/19 22:01	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.4	1.46		04/25/19 22:01	78-93-3	
Carbon disulfide	ND	ug/m3	0.92	1.46		04/25/19 22:01	75-15-0	
Dichlorodifluoromethane	2.1	ug/m3	1.5	1.46		04/25/19 22:01	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.46		04/25/19 22:01	75-35-4	
cis-1,2-Dichloroethene	6.8	ug/m3	1.2	1.46		04/25/19 22:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.46		04/25/19 22:01	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.46		04/25/19 22:01	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.6	1.46		04/25/19 22:01	622-96-8	
n-Hexane	ND	ug/m3	1.0	1.46		04/25/19 22:01	110-54-3	
Methylene Chloride	ND	ug/m3	5.2	1.46		04/25/19 22:01	75-09-2	
Tetrachloroethene	31.5	ug/m3	1.0	1.46		04/25/19 22:01	127-18-4	
Toluene	1.5	ug/m3	1.1	1.46		04/25/19 22:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.46		04/25/19 22:01	71-55-6	
Trichloroethene	1.6	ug/m3	0.80	1.46		04/25/19 22:01	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.5	1.46		04/25/19 22:01	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.5	1.46		04/25/19 22:01	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.5	1.46		04/25/19 22:01	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.38	1.46		04/25/19 22:01	75-01-4	
m&p-Xylene	ND	ug/m3	2.6	1.46		04/25/19 22:01	179601-23-1	
o-Xylene	ND	ug/m3	1.3	1.46		04/25/19 22:01	95-47-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 2331 E MAIN ST

Pace Project No.: 10471486

QC Batch: 601509 Analysis Method: TO-15

QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level

Associated Lab Samples: 10471486001, 10471486002, 10471486003

METHOD BLANK: 3250728 Matrix: Air

Associated Lab Samples: 10471486001, 10471486002, 10471486003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	04/24/19 09:34	
1,1-Dichloroethene	ug/m3	ND	0.81	04/24/19 09:34	
1,2,4-Trimethylbenzene	ug/m3	ND	1.0	04/24/19 09:34	
1,3,5-Trimethylbenzene	ug/m3	ND	1.0	04/24/19 09:34	
2,2,4-Trimethylpentane	ug/m3	ND	2.4	04/24/19 09:34	N2
2-Butanone (MEK)	ug/m3	ND	3.0	04/24/19 09:34	
4-Ethyltoluene	ug/m3	ND	2.5	04/24/19 09:34	
Acetone	ug/m3	ND	2.4	04/24/19 09:34	
Benzene	ug/m3	ND	0.32	04/24/19 09:34	
Carbon disulfide	ug/m3	ND	0.63	04/24/19 09:34	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	04/24/19 09:34	
Dichlorodifluoromethane	ug/m3	ND	1.0	04/24/19 09:34	
Ethylbenzene	ug/m3	ND	0.88	04/24/19 09:34	
m&p-Xylene	ug/m3	ND	1.8	04/24/19 09:34	
Methylene Chloride	ug/m3	ND	3.5	04/24/19 09:34	
n-Hexane	ug/m3	ND	0.72	04/24/19 09:34	
o-Xylene	ug/m3	ND	0.88	04/24/19 09:34	
Tetrachloroethene	ug/m3	ND	0.69	04/24/19 09:34	
Toluene	ug/m3	ND	0.77	04/24/19 09:34	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	04/24/19 09:34	
Trichloroethene	ug/m3	ND	0.55	04/24/19 09:34	
Vinyl chloride	ug/m3	ND	0.26	04/24/19 09:34	

LABORATORY CONTROL SAMPLE: 3250729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	59.1	106	70-130	
1,1-Dichloroethene	ug/m3	40.3	47.0	117	70-130	
1,2,4-Trimethylbenzene	ug/m3	50	57.4	115	70-134	
1,3,5-Trimethylbenzene	ug/m3	50	53.7	107	70-132	
2,2,4-Trimethylpentane	ug/m3	47.5	50.5	106	68-138	N2
2-Butanone (MEK)	ug/m3	30	29.1	97	70-130	
4-Ethyltoluene	ug/m3	50	56.9	114	70-138	
Acetone	ug/m3	121	125	103	67-130	
Benzene	ug/m3	32.5	34.0	105	70-130	
Carbon disulfide	ug/m3	31.6	34.6	109	56-137	
cis-1,2-Dichloroethene	ug/m3	40.3	41.9	104	70-130	
Dichlorodifluoromethane	ug/m3	50.3	50.7	101	70-130	
Ethylbenzene	ug/m3	44.1	49.4	112	67-131	
m&p-Xylene	ug/m3	88.3	97.3	110	70-132	

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QUALITY CONTROL DATA

Project: 2331 E MAIN ST

Pace Project No.: 10471486

LABORATORY CONTROL SAMPLE: 3250729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/m3	177	185	105	65-130	
n-Hexane	ug/m3	35.8	34.9	97	66-130	
o-Xylene	ug/m3	44.1	46.8	106	70-130	
Tetrachloroethene	ug/m3	68.9	70.0	102	70-130	
Toluene	ug/m3	38.3	40.6	106	70-130	
trans-1,2-Dichloroethene	ug/m3	40.3	47.8	119	70-130	
Trichloroethene	ug/m3	54.6	52.9	97	70-130	
Vinyl chloride	ug/m3	26	29.3	113	70-130	

SAMPLE DUPLICATE: 3252255

Parameter	Units	10471486001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	ND	ND		25	
2,2,4-Trimethylpentane	ug/m3	ND	ND		25 N2	
2-Butanone (MEK)	ug/m3	ND	.63J		25	
4-Ethyltoluene	ug/m3	ND	ND		25	
Acetone	ug/m3	20.9	21.1	1	25	
Benzene	ug/m3	ND	.43J		25	
Carbon disulfide	ug/m3	ND	ND		25	
cis-1,2-Dichloroethene	ug/m3	57.6	57.5	0	25	
Dichlorodifluoromethane	ug/m3	2.5	2.4	3	25	
Ethylbenzene	ug/m3	ND	ND		25	
m&p-Xylene	ug/m3	ND	1.4J		25	
Methylene Chloride	ug/m3	7.4	7.5	2	25	
n-Hexane	ug/m3	1.2	.93J		25	
o-Xylene	ug/m3	1.3	1.4	3	25	
Tetrachloroethene	ug/m3	273	284	4	25	
Toluene	ug/m3	1.3	1.3	1	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	11.2	11.3	1	25	
Vinyl chloride	ug/m3	ND	0.72		25	

SAMPLE DUPLICATE: 3252256

Parameter	Units	10471486002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	ND	ND		25	
2,2,4-Trimethylpentane	ug/m3	ND	ND		25 N2	
2-Butanone (MEK)	ug/m3	ND	ND		25	

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QUALITY CONTROL DATA

Project: 2331 E MAIN ST
Pace Project No.: 10471486

SAMPLE DUPLICATE: 3252256

Parameter	Units	10471486002 Result	Dup Result	RPD	Max RPD	Qualifiers
4-Ethyltoluene	ug/m ³	ND	ND		25	
Acetone	ug/m ³	8.3	9.1	10	25	
Benzene	ug/m ³	ND	.39J		25	
Carbon disulfide	ug/m ³	ND	ND		25	
cis-1,2-Dichloroethene	ug/m ³	ND	ND		25	
Dichlorodifluoromethane	ug/m ³	2.2	2.5	10	25	
Ethylbenzene	ug/m ³	ND	ND		25	
m&p-Xylene	ug/m ³	ND	ND		25	
Methylene Chloride	ug/m ³	ND	3.3J		25	
n-Hexane	ug/m ³	ND	ND		25	
o-Xylene	ug/m ³	ND	ND		25	
Tetrachloroethene	ug/m ³	ND	ND		25	
Toluene	ug/m ³	ND	.94J		25	
trans-1,2-Dichloroethene	ug/m ³	ND	ND		25	
Trichloroethene	ug/m ³	ND	ND		25	
Vinyl chloride	ug/m ³	ND	ND		25	

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QUALITY CONTROL DATA

Project: 2331 E MAIN ST

Pace Project No.: 10471486

QC Batch:	601789	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level
Associated Lab Samples:	10471486004, 10471486005, 10471486006		

METHOD BLANK: 3252677 Matrix: Air

Associated Lab Samples: 10471486004, 10471486005, 10471486006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.56	04/25/19 15:21	
1,1-Dichloroethene	ug/m3	ND	0.40	04/25/19 15:21	
1,2,4-Trimethylbenzene	ug/m3	ND	0.50	04/25/19 15:21	
1,3,5-Trimethylbenzene	ug/m3	ND	0.50	04/25/19 15:21	
2,2,4-Trimethylpentane	ug/m3	ND	1.2	04/25/19 15:21	N2
2-Butanone (MEK)	ug/m3	ND	1.5	04/25/19 15:21	
4-Ethyltoluene	ug/m3	ND	1.2	04/25/19 15:21	
Acetone	ug/m3	ND	1.2	04/25/19 15:21	
Benzene	ug/m3	ND	0.16	04/25/19 15:21	
Carbon disulfide	ug/m3	ND	0.32	04/25/19 15:21	
cis-1,2-Dichloroethene	ug/m3	ND	0.40	04/25/19 15:21	
Dichlorodifluoromethane	ug/m3	ND	0.50	04/25/19 15:21	
Ethylbenzene	ug/m3	ND	0.44	04/25/19 15:21	
m&p-Xylene	ug/m3	ND	0.88	04/25/19 15:21	
Methylene Chloride	ug/m3	ND	1.8	04/25/19 15:21	
n-Hexane	ug/m3	ND	0.36	04/25/19 15:21	
o-Xylene	ug/m3	ND	0.44	04/25/19 15:21	
Tetrachloroethene	ug/m3	ND	0.34	04/25/19 15:21	
Toluene	ug/m3	ND	0.38	04/25/19 15:21	
trans-1,2-Dichloroethene	ug/m3	ND	0.40	04/25/19 15:21	
Trichloroethene	ug/m3	ND	0.27	04/25/19 15:21	
Vinyl chloride	ug/m3	ND	0.13	04/25/19 15:21	

LABORATORY CONTROL SAMPLE: 3252678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	56.6	54.0	95	70-130	
1,1-Dichloroethene	ug/m3	43.5	39.5	91	70-130	
1,2,4-Trimethylbenzene	ug/m3	53	46.6	88	70-134	
1,3,5-Trimethylbenzene	ug/m3	53.5	46.7	87	70-132	
2,2,4-Trimethylpentane	ug/m3	48.4	46.0	95	68-138	N2
2-Butanone (MEK)	ug/m3	32.4	26.1	81	70-130	
4-Ethyltoluene	ug/m3	52	46.9	90	70-138	
Acetone	ug/m3	26.6	27.5	103	67-130	
Benzene	ug/m3	34.4	32.2	94	70-130	
Carbon disulfide	ug/m3	32.9	33.2	101	56-137	
cis-1,2-Dichloroethene	ug/m3	41.9	41.1	98	70-130	
Dichlorodifluoromethane	ug/m3	52.8	51.2	97	70-130	
Ethylbenzene	ug/m3	45.5	41.2	91	67-131	
m&p-Xylene	ug/m3	45.9	47.6	104	70-132	

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QUALITY CONTROL DATA

Project: 2331 E MAIN ST
 Pace Project No.: 10471486

LABORATORY CONTROL SAMPLE: 3252678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/m3	38.1	39.5	104	65-130	
n-Hexane	ug/m3	37.6	33.6	89	66-130	
o-Xylene	ug/m3	44.1	40.2	91	70-130	
Tetrachloroethene	ug/m3	70.3	62.1	88	70-130	
Toluene	ug/m3	39.4	36.9	94	70-130	
trans-1,2-Dichloroethene	ug/m3	41.5	40.4	97	70-130	
Trichloroethene	ug/m3	56.3	54.1	96	70-130	
Vinyl chloride	ug/m3	28.1	31.2	111	70-130	

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QUALIFIERS

Project: 2331 E MAIN ST
Pace Project No.: 10471486

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2331 E MAIN ST
 Pace Project No.: 10471486

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10471486001	IA-001 (PUMP ROOM)	TO-15	601509		
10471486002	IA-AMBIENT (ON DOCK)	TO-15	601509		
10471486003	IA-009 (F-Warehouse)	TO-15	601509		
10471486004	IA-010 (D-Jeweler Sho)	TO-15	601789		
10471486005	IA-011 (Rest Room-B)	TO-15	601789		
10471486006	IA-012 (C-Clothing Store)	TO-15	601789		

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Document Name:
Air Sample Condition Upon Receipt
Document No.:
F-MN-A-106-rev.18

Document Revised: 31Jan2019

Page 1 of 1

Issuing Authority:

WO# : 10471486

Air Sample Condition
Upon ReceiptClient Name:
2331 E. Market St. II

Project #:

Courier: FedEx UPS USPS Client
 Pace SpeeDee Commercial See Exception

Tracking Number: 786745337678, 67

PM: NB3

Due Date: 04/26/19

CLIENT: Sarva Bio

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes NoPacking Material: Bubble Wrap Bubble Bags Foam None Tin Can Other: _____ Temp Blank rec: Yes No

Temp. (TO17 and TO13 samples only) (°C): _____ Corrected Temp (°C): _____

Thermometer Used: G87A9170600254Temp should be above freezing to 6°C Correction Factor: _____ Date & Initials of Person Examining Contents: TR 4/19/19Type of ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A 4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	10.
Media: <input checked="" type="checkbox"/> Air Can <input type="checkbox"/> Airbag <input type="checkbox"/> Filter <input type="checkbox"/> TDT <input type="checkbox"/> Passive	11. Individually Certified Cans Y <input checked="" type="checkbox"/> (N <input type="checkbox"/>) list which samples)		
Is sufficient information available to reconcile samples to the COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Analys. S listed on media order.
Do cans need to be pressurized (3C and ASTM 1946 DO NOT PRESSURIZE)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	12. samples matched to COC. no information on tags. No collection date/time listed for samples 003-007, used
			13. for samples 003-007, used

Samples Received:

Pressure Gauge # 10AIR34 10AIR35 +m/s from previous SCFM psig

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
DA-001 (Pump Room)	1251	0868	-1.5	5					
DA-Ambient (on Dock)	2338	1058	-4	"					
DA-009 (F-warehouse)	0012	0403	-12	"					
DA-016 (D-Jewelry Shop)	3619	1093	-2.5	"					
DA-011 (Rest.Rom-B)	0393	0857	-2	"					
DA-012 (C -	3564	1051	-2.5	"					
DA-013 (A -	1218	1102	-2.9	"					

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Jathan Roberts

Date: 4/26/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

August 09, 2019

Steve Vedder
Environmental Products & Services of Vermont,
Inc.
1539 Bobali Drive
Harrisburg, PA 17104

RE: Project: 2331 East Market St.
Pace Project No.: 10484857

Dear Steve Vedder:

Enclosed are the analytical results for sample(s) received by the laboratory on July 26, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nathan Boberg
nathan.boberg@pacelabs.com
(612)360-0728
Project Manager

Enclosures

cc: Satya Ganti, Sarva Bio Remed, LLC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 2331 East Market St.
 Pace Project No.: 10484857

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
 A2LA Certification #: 2926.01
 Alabama Certification #: 40770
 Alaska Contaminated Sites Certification #: 17-009
 Alaska DW Certification #: MN00064
 Arizona Certification #: AZ0014
 Arkansas DW Certification #: MN00064
 Arkansas WW Certification #: 88-0680
 California Certification #: 2929
 CNMI Saipan Certification #: MP0003
 Colorado Certification #: MN00064
 Connecticut Certification #: PH-0256
 EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
 Florida Certification #: E87605
 Georgia Certification #: 959
 Guam EPA Certification #: MN00064
 Hawaii Certification #: MN00064
 Idaho Certification #: MN00064
 Illinois Certification #: 200011
 Indiana Certification #: C-MN-01
 Iowa Certification #: 368
 Kansas Certification #: E-10167
 Kentucky DW Certification #: 90062
 Kentucky WW Certification #: 90062
 Louisiana DEQ Certification #: 03086
 Louisiana DW Certification #: MN00064
 Maine Certification #: MN00064
 Maryland Certification #: 322
 Massachusetts Certification #: M-MN064
 Michigan Certification #: 9909
 Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137
 Minnesota Petrofund Certification #: 1240
 Mississippi Certification #: MN00064
 Missouri Certification #: 10100
 Montana Certification #: CERT0092
 Nebraska Certification #: NE-OS-18-06
 Nevada Certification #: MN00064
 New Hampshire Certification #: 2081
 New Jersey Certification #: MN002
 New York Certification #: 11647
 North Carolina DW Certification #: 27700
 North Carolina WW Certification #: 530
 North Dakota Certification #: R-036
 Ohio DW Certification #: 41244
 Ohio VAP Certification #: CL101
 Oklahoma Certification #: 9507
 Oregon Primary Certification #: MN300001
 Oregon Secondary Certification #: MN200001
 Pennsylvania Certification #: 68-00563
 Puerto Rico Certification #: MN00064
 South Carolina Certification #: 74003001
 Tennessee Certification #: TN02818
 Texas Certification #: T104704192
 Utah Certification #: MN00064
 Vermont Certification #: VT-027053137
 Virginia Certification #: 460163
 Washington Certification #: C486
 West Virginia DEP Certification #: 382
 West Virginia DW Certification #: 9952 C
 Wisconsin Certification #: 999407970
 Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2331 East Market St.
Pace Project No.: 10484857

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10484857001	IA-001 (Pump Room)	Air	07/24/19 15:30	07/26/19 09:40
10484857002	IA-002 (Middle Room)	Air	07/24/19 15:50	07/26/19 09:40
10484857003	IA-003 (Below Dock)	Air	07/24/19 15:45	07/26/19 09:40
10484857004	IA-004 (Suite # 112)	Air	07/24/19 11:10	07/26/19 09:40
10484857005	IA-005 (Rest Room)	Air	07/24/19 16:00	07/26/19 09:40
10484857006	IA-006 (Vault)	Air	07/24/19 16:15	07/26/19 09:40
10484857007	IA-007 (Yoga)	Air	07/24/19 16:05	07/26/19 09:40
10484857008	IA-008 (Wis)	Air	07/24/19 16:10	07/26/19 09:40
10484857009	IA-009 (On the Dock)	Air	07/24/19 16:30	07/26/19 09:40

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SAMPLE ANALYTE COUNT

Project: 2331 East Market St.
 Pace Project No.: 10484857

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10484857001	IA-001 (Pump Room)	TO-15	MJL	22
10484857002	IA-002 (Middle Room)	TO-15	MJL	22
10484857003	IA-003 (Below Dock)	TO-15	MJL	22
10484857004	IA-004 (Suite # 112)	TO-15	MJL	22
10484857005	IA-005 (Rest Room)	TO-15	MG2	22
10484857006	IA-006 (Vault)	TO-15	MJL	22
10484857007	IA-007 (Yoga)	TO-15	MJL	22
10484857008	IA-008 (Wis)	TO-15	MJL	22
10484857009	IA-009 (On the Dock)	TO-15	MJL	22

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2331 East Market St.
Pace Project No.: 10484857

Method: TO-15
Description: TO15 MSV AIR
Client: Sarva Bio Remed, LLC
Date: August 09, 2019

General Information:

9 samples were analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 623912

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3367352)
 - 2,2,4-Trimethylpentane
- DUP (Lab ID: 3368553)
 - 2,2,4-Trimethylpentane
- IA-005 (Rest Room) (Lab ID: 10484857005)
 - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3367353)
 - 2,2,4-Trimethylpentane

QC Batch: 624608

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3370989)
 - 2,2,4-Trimethylpentane

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2331 East Market St.
Pace Project No.: 10484857

Method: TO-15

Description: TO15 MSV AIR

Client: Sarva Bio Remed, LLC

Date: August 09, 2019

Analyte Comments:

QC Batch: 624608

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- DUP (Lab ID: 3371626)
 - 2,2,4-Trimethylpentane
- IA-001 (Pump Room) (Lab ID: 10484857001)
 - 2,2,4-Trimethylpentane
- IA-002 (Middle Room) (Lab ID: 10484857002)
 - 2,2,4-Trimethylpentane
- IA-003 (Below Dock) (Lab ID: 10484857003)
 - 2,2,4-Trimethylpentane
- IA-004 (Suite # 112) (Lab ID: 10484857004)
 - 2,2,4-Trimethylpentane
- IA-006 (Vault) (Lab ID: 10484857006)
 - 2,2,4-Trimethylpentane
- IA-007 (Yoga) (Lab ID: 10484857007)
 - 2,2,4-Trimethylpentane
- IA-008 (Wis) (Lab ID: 10484857008)
 - 2,2,4-Trimethylpentane
- IA-009 (On the Dock) (Lab ID: 10484857009)
 - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3370990)
 - 2,2,4-Trimethylpentane

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2331 East Market St.

Pace Project No.: 10484857

Sample: IA-001 (Pump Room)	Lab ID: 10484857001	Collected: 07/24/19 15:30	Received: 07/26/19 09:40	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	55.2	ug/m3	3.6	1.49		08/06/19 21:37	67-64-1	
Benzene	0.55	ug/m3	0.48	1.49		08/06/19 21:37	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.5	1.49		08/06/19 21:37	78-93-3	
Carbon disulfide	ND	ug/m3	0.94	1.49		08/06/19 21:37	75-15-0	
Dichlorodifluoromethane	3.0	ug/m3	1.5	1.49		08/06/19 21:37	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.49		08/06/19 21:37	75-35-4	
cis-1,2-Dichloroethene	86.5	ug/m3	1.2	1.49		08/06/19 21:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.49		08/06/19 21:37	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.49		08/06/19 21:37	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.7	1.49		08/06/19 21:37	622-96-8	
n-Hexane	ND	ug/m3	1.1	1.49		08/06/19 21:37	110-54-3	
Methylene Chloride	ND	ug/m3	5.3	1.49		08/06/19 21:37	75-09-2	
Tetrachloroethene	700	ug/m3	20.5	29.8		08/07/19 10:35	127-18-4	
Toluene	3.3	ug/m3	1.1	1.49		08/06/19 21:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.49		08/06/19 21:37	71-55-6	
Trichloroethene	26.8	ug/m3	0.81	1.49		08/06/19 21:37	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.5	1.49		08/06/19 21:37	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.5	1.49		08/06/19 21:37	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.5	1.49		08/06/19 21:37	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.39	1.49		08/06/19 21:37	75-01-4	
m&p-Xylene	ND	ug/m3	2.6	1.49		08/06/19 21:37	179601-23-1	
o-Xylene	ND	ug/m3	1.3	1.49		08/06/19 21:37	95-47-6	

Sample: IA-002 (Middle Room)	Lab ID: 10484857002	Collected: 07/24/19 15:50	Received: 07/26/19 09:40	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	56.0	ug/m3	3.6	1.49		08/06/19 17:44	67-64-1	
Benzene	0.49	ug/m3	0.48	1.49		08/06/19 17:44	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.5	1.49		08/06/19 17:44	78-93-3	
Carbon disulfide	ND	ug/m3	0.94	1.49		08/06/19 17:44	75-15-0	
Dichlorodifluoromethane	2.8	ug/m3	1.5	1.49		08/06/19 17:44	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.49		08/06/19 17:44	75-35-4	
cis-1,2-Dichloroethene	79.3	ug/m3	1.2	1.49		08/06/19 17:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.49		08/06/19 17:44	156-60-5	
Ethylbenzene	4.1	ug/m3	1.3	1.49		08/06/19 17:44	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.7	1.49		08/06/19 17:44	622-96-8	
n-Hexane	1.1	ug/m3	1.1	1.49		08/06/19 17:44	110-54-3	
Methylene Chloride	ND	ug/m3	5.3	1.49		08/06/19 17:44	75-09-2	
Tetrachloroethene	603	ug/m3	20.5	29.8		08/07/19 11:02	127-18-4	
Toluene	2.7	ug/m3	1.1	1.49		08/06/19 17:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.49		08/06/19 17:44	71-55-6	
Trichloroethene	23.4	ug/m3	0.81	1.49		08/06/19 17:44	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.5	1.49		08/06/19 17:44	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.5	1.49		08/06/19 17:44	108-67-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 2331 East Market St.

Pace Project No.: 10484857

Sample: IA-002 (Middle Room)	Lab ID: 10484857002	Collected: 07/24/19 15:50	Received: 07/26/19 09:40	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
2,2,4-Trimethylpentane	ND	ug/m3	3.5	1.49		08/06/19 17:44	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.39	1.49		08/06/19 17:44	75-01-4	
m&p-Xylene	19.4	ug/m3	2.6	1.49		08/06/19 17:44	179601-23-1	
o-Xylene	6.7	ug/m3	1.3	1.49		08/06/19 17:44	95-47-6	
Sample: IA-003 (Below Dock)	Lab ID: 10484857003	Collected: 07/24/19 15:45	Received: 07/26/19 09:40	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	50.0	ug/m3	3.6	1.49		08/06/19 18:13	67-64-1	
Benzene	0.55	ug/m3	0.48	1.49		08/06/19 18:13	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.5	1.49		08/06/19 18:13	78-93-3	
Carbon disulfide	ND	ug/m3	0.94	1.49		08/06/19 18:13	75-15-0	
Dichlorodifluoromethane	2.9	ug/m3	1.5	1.49		08/06/19 18:13	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.49		08/06/19 18:13	75-35-4	
cis-1,2-Dichloroethene	92.8	ug/m3	1.2	1.49		08/06/19 18:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.49		08/06/19 18:13	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.49		08/06/19 18:13	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.7	1.49		08/06/19 18:13	622-96-8	
n-Hexane	1.1	ug/m3	1.1	1.49		08/06/19 18:13	110-54-3	
Methylene Chloride	8.0	ug/m3	5.3	1.49		08/06/19 18:13	75-09-2	
Tetrachloroethene	739	ug/m3	20.5	29.8		08/07/19 13:19	127-18-4	
Toluene	2.6	ug/m3	1.1	1.49		08/06/19 18:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.49		08/06/19 18:13	71-55-6	
Trichloroethene	27.9	ug/m3	0.81	1.49		08/06/19 18:13	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.5	1.49		08/06/19 18:13	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.5	1.49		08/06/19 18:13	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.5	1.49		08/06/19 18:13	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.39	1.49		08/06/19 18:13	75-01-4	
m&p-Xylene	ND	ug/m3	2.6	1.49		08/06/19 18:13	179601-23-1	
o-Xylene	ND	ug/m3	1.3	1.49		08/06/19 18:13	95-47-6	
Sample: IA-004 (Suite # 112)	Lab ID: 10484857004	Collected: 07/24/19 11:10	Received: 07/26/19 09:40	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	105	ug/m3	3.5	1.44		08/06/19 19:12	67-64-1	
Benzene	0.58	ug/m3	0.47	1.44		08/06/19 19:12	71-43-2	
2-Butanone (MEK)	5.7	ug/m3	4.3	1.44		08/06/19 19:12	78-93-3	
Carbon disulfide	ND	ug/m3	0.91	1.44		08/06/19 19:12	75-15-0	
Dichlorodifluoromethane	2.7	ug/m3	1.5	1.44		08/06/19 19:12	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.44		08/06/19 19:12	75-35-4	

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ANALYTICAL RESULTS

Project: 2331 East Market St.

Pace Project No.: 10484857

Sample: IA-004 (Suite # 112)	Lab ID: 10484857004	Collected: 07/24/19 11:10	Received: 07/26/19 09:40	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
cis-1,2-Dichloroethene	74.6	ug/m3	1.2	1.44		08/06/19 19:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.44		08/06/19 19:12	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.44		08/06/19 19:12	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.6	1.44		08/06/19 19:12	622-96-8	
n-Hexane	1.3	ug/m3	1.0	1.44		08/06/19 19:12	110-54-3	
Methylene Chloride	6.8	ug/m3	5.1	1.44		08/06/19 19:12	75-09-2	
Tetrachloroethene	607	ug/m3	19.8	28.8		08/07/19 12:52	127-18-4	
Toluene	3.2	ug/m3	1.1	1.44		08/06/19 19:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.44		08/06/19 19:12	71-55-6	
Trichloroethene	22.6	ug/m3	0.79	1.44		08/06/19 19:12	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.4	1.44		08/06/19 19:12	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.4	1.44		08/06/19 19:12	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.4	1.44		08/06/19 19:12	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.37	1.44		08/06/19 19:12	75-01-4	
m&p-Xylene	ND	ug/m3	2.5	1.44		08/06/19 19:12	179601-23-1	
o-Xylene	ND	ug/m3	1.3	1.44		08/06/19 19:12	95-47-6	
Sample: IA-005 (Rest Room)	Lab ID: 10484857005	Collected: 07/24/19 16:00	Received: 07/26/19 09:40	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	64.5	ug/m3	3.7	1.55		08/03/19 00:42	67-64-1	
Benzene	0.64	ug/m3	0.50	1.55		08/03/19 00:42	71-43-2	
2-Butanone (MEK)	7.0	ug/m3	4.6	1.55		08/03/19 00:42	78-93-3	
Carbon disulfide	ND	ug/m3	0.98	1.55		08/03/19 00:42	75-15-0	
Dichlorodifluoromethane	2.5	ug/m3	1.6	1.55		08/03/19 00:42	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.55		08/03/19 00:42	75-35-4	
cis-1,2-Dichloroethene	61.0	ug/m3	1.2	1.55		08/03/19 00:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		08/03/19 00:42	156-60-5	
Ethylbenzene	ND	ug/m3	1.4	1.55		08/03/19 00:42	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.9	1.55		08/03/19 00:42	622-96-8	
n-Hexane	ND	ug/m3	1.1	1.55		08/03/19 00:42	110-54-3	
Methylene Chloride	ND	ug/m3	5.5	1.55		08/03/19 00:42	75-09-2	
Tetrachloroethene	818	ug/m3	21.4	31		08/04/19 10:49	127-18-4	
Toluene	2.5	ug/m3	1.2	1.55		08/03/19 00:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.55		08/03/19 00:42	71-55-6	
Trichloroethene	18.9	ug/m3	0.85	1.55		08/03/19 00:42	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.5	1.55		08/03/19 00:42	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.5	1.55		08/03/19 00:42	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.7	1.55		08/03/19 00:42	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.40	1.55		08/03/19 00:42	75-01-4	
m&p-Xylene	ND	ug/m3	2.7	1.55		08/03/19 00:42	179601-23-1	
o-Xylene	ND	ug/m3	1.4	1.55		08/03/19 00:42	95-47-6	

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ANALYTICAL RESULTS

Project: 2331 East Market St.

Pace Project No.: 10484857

Sample: IA-006 (Vault)	Lab ID: 10484857006	Collected: 07/24/19 16:15	Received: 07/26/19 09:40	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	56.9	ug/m3	3.5	1.44		08/06/19 19:41	67-64-1	
Benzene	0.70	ug/m3	0.47	1.44		08/06/19 19:41	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.3	1.44		08/06/19 19:41	78-93-3	
Carbon disulfide	ND	ug/m3	0.91	1.44		08/06/19 19:41	75-15-0	
Dichlorodifluoromethane	2.9	ug/m3	1.5	1.44		08/06/19 19:41	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.44		08/06/19 19:41	75-35-4	
cis-1,2-Dichloroethene	60.9	ug/m3	1.2	1.44		08/06/19 19:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.44		08/06/19 19:41	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.44		08/06/19 19:41	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.6	1.44		08/06/19 19:41	622-96-8	
n-Hexane	ND	ug/m3	1.0	1.44		08/06/19 19:41	110-54-3	
Methylene Chloride	5.7	ug/m3	5.1	1.44		08/06/19 19:41	75-09-2	
Tetrachloroethene	439	ug/m3	19.8	28.8		08/07/19 11:57	127-18-4	
Toluene	3.4	ug/m3	1.1	1.44		08/06/19 19:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.44		08/06/19 19:41	71-55-6	
Trichloroethene	19.1	ug/m3	0.79	1.44		08/06/19 19:41	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.4	1.44		08/06/19 19:41	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.4	1.44		08/06/19 19:41	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.4	1.44		08/06/19 19:41	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.37	1.44		08/06/19 19:41	75-01-4	
m&p-Xylene	ND	ug/m3	2.5	1.44		08/06/19 19:41	179601-23-1	
o-Xylene	ND	ug/m3	1.3	1.44		08/06/19 19:41	95-47-6	

Sample: IA-007 (Yoga)	Lab ID: 10484857007	Collected: 07/24/19 16:05	Received: 07/26/19 09:40	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	77.6	ug/m3	3.5	1.44		08/06/19 20:10	67-64-1	
Benzene	0.68	ug/m3	0.47	1.44		08/06/19 20:10	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.3	1.44		08/06/19 20:10	78-93-3	
Carbon disulfide	ND	ug/m3	0.91	1.44		08/06/19 20:10	75-15-0	
Dichlorodifluoromethane	3.1	ug/m3	1.5	1.44		08/06/19 20:10	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.44		08/06/19 20:10	75-35-4	
cis-1,2-Dichloroethene	75.2	ug/m3	1.2	1.44		08/06/19 20:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.44		08/06/19 20:10	156-60-5	
Ethylbenzene	ND	ug/m3	1.3	1.44		08/06/19 20:10	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.6	1.44		08/06/19 20:10	622-96-8	
n-Hexane	ND	ug/m3	1.0	1.44		08/06/19 20:10	110-54-3	
Methylene Chloride	ND	ug/m3	5.1	1.44		08/06/19 20:10	75-09-2	
Tetrachloroethene	545	ug/m3	19.8	28.8		08/07/19 12:24	127-18-4	
Toluene	3.7	ug/m3	1.1	1.44		08/06/19 20:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.6	1.44		08/06/19 20:10	71-55-6	
Trichloroethene	22.7	ug/m3	0.79	1.44		08/06/19 20:10	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.4	1.44		08/06/19 20:10	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.4	1.44		08/06/19 20:10	108-67-8	

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ANALYTICAL RESULTS

Project: 2331 East Market St.

Pace Project No.: 10484857

Sample: IA-007 (Yoga)		Lab ID: 10484857007	Collected: 07/24/19 16:05		Received: 07/26/19 09:40		Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
2,2,4-Trimethylpentane	ND	ug/m3	3.4	1.44		08/06/19 20:10	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.37	1.44		08/06/19 20:10	75-01-4	
m&p-Xylene	ND	ug/m3	2.5	1.44		08/06/19 20:10	179601-23-1	
o-Xylene	ND	ug/m3	1.3	1.44		08/06/19 20:10	95-47-6	
Sample: IA-008 (Wis)		Lab ID: 10484857008	Collected: 07/24/19 16:10		Received: 07/26/19 09:40		Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	73.7	ug/m3	4.8	2.01		08/06/19 20:39	67-64-1	
Benzene	0.85	ug/m3	0.65	2.01		08/06/19 20:39	71-43-2	
2-Butanone (MEK)	ND	ug/m3	6.0	2.01		08/06/19 20:39	78-93-3	
Carbon disulfide	ND	ug/m3	1.3	2.01		08/06/19 20:39	75-15-0	
Dichlorodifluoromethane	3.1	ug/m3	2.0	2.01		08/06/19 20:39	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.6	2.01		08/06/19 20:39	75-35-4	
cis-1,2-Dichloroethene	76.7	ug/m3	1.6	2.01		08/06/19 20:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.6	2.01		08/06/19 20:39	156-60-5	
Ethylbenzene	ND	ug/m3	1.8	2.01		08/06/19 20:39	100-41-4	
4-Ethyltoluene	ND	ug/m3	5.0	2.01		08/06/19 20:39	622-96-8	
n-Hexane	ND	ug/m3	1.4	2.01		08/06/19 20:39	110-54-3	
Methylene Chloride	ND	ug/m3	7.1	2.01		08/06/19 20:39	75-09-2	
Tetrachloroethene	524	ug/m3	27.7	40.2		08/07/19 11:30	127-18-4	
Toluene	3.8	ug/m3	1.5	2.01		08/06/19 20:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	2.2	2.01		08/06/19 20:39	71-55-6	
Trichloroethene	22.8	ug/m3	1.1	2.01		08/06/19 20:39	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	2.0	2.01		08/06/19 20:39	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	2.0	2.01		08/06/19 20:39	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	4.8	2.01		08/06/19 20:39	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.52	2.01		08/06/19 20:39	75-01-4	
m&p-Xylene	ND	ug/m3	3.6	2.01		08/06/19 20:39	179601-23-1	
o-Xylene	ND	ug/m3	1.8	2.01		08/06/19 20:39	95-47-6	
Sample: IA-009 (On the Dock)		Lab ID: 10484857009	Collected: 07/24/19 16:30		Received: 07/26/19 09:40		Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	11.2	ug/m3	3.7	1.55		08/06/19 21:08	67-64-1	
Benzene	ND	ug/m3	0.50	1.55		08/06/19 21:08	71-43-2	
2-Butanone (MEK)	ND	ug/m3	4.6	1.55		08/06/19 21:08	78-93-3	
Carbon disulfide	ND	ug/m3	0.98	1.55		08/06/19 21:08	75-15-0	
Dichlorodifluoromethane	3.0	ug/m3	1.6	1.55		08/06/19 21:08	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.2	1.55		08/06/19 21:08	75-35-4	

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ANALYTICAL RESULTS

Project: 2331 East Market St.

Pace Project No.: 10484857

Sample: IA-009 (On the Dock)	Lab ID: 10484857009	Collected: 07/24/19 16:30	Received: 07/26/19 09:40	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		08/06/19 21:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		08/06/19 21:08	156-60-5	
Ethylbenzene	ND	ug/m3	1.4	1.55		08/06/19 21:08	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.9	1.55		08/06/19 21:08	622-96-8	
n-Hexane	ND	ug/m3	1.1	1.55		08/06/19 21:08	110-54-3	
Methylene Chloride	ND	ug/m3	5.5	1.55		08/06/19 21:08	75-09-2	
Tetrachloroethene	1.1	ug/m3	1.1	1.55		08/06/19 21:08	127-18-4	
Toluene	1.2	ug/m3	1.2	1.55		08/06/19 21:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.55		08/06/19 21:08	71-55-6	
Trichloroethene	ND	ug/m3	0.85	1.55		08/06/19 21:08	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	1.5	1.55		08/06/19 21:08	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.5	1.55		08/06/19 21:08	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	3.7	1.55		08/06/19 21:08	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.40	1.55		08/06/19 21:08	75-01-4	
m&p-Xylene	ND	ug/m3	2.7	1.55		08/06/19 21:08	179601-23-1	
o-Xylene	ND	ug/m3	1.4	1.55		08/06/19 21:08	95-47-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 2331 East Market St.

Pace Project No.: 10484857

QC Batch: 623912

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: TO15 MSV AIR Low Level

Associated Lab Samples: 10484857005

METHOD BLANK: 3367352

Matrix: Air

Associated Lab Samples: 10484857005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.56	08/02/19 14:32	
1,1-Dichloroethene	ug/m3	ND	0.40	08/02/19 14:32	
1,2,4-Trimethylbenzene	ug/m3	ND	0.50	08/02/19 14:32	
1,3,5-Trimethylbenzene	ug/m3	ND	0.50	08/02/19 14:32	
2,2,4-Trimethylpentane	ug/m3	ND	1.2	08/02/19 14:32	N2
2-Butanone (MEK)	ug/m3	ND	1.5	08/02/19 14:32	
4-Ethyltoluene	ug/m3	ND	1.2	08/02/19 14:32	
Acetone	ug/m3	ND	1.2	08/02/19 14:32	
Benzene	ug/m3	ND	0.16	08/02/19 14:32	
Carbon disulfide	ug/m3	ND	0.32	08/02/19 14:32	
cis-1,2-Dichloroethene	ug/m3	ND	0.40	08/02/19 14:32	
Dichlorodifluoromethane	ug/m3	ND	0.50	08/02/19 14:32	
Ethylbenzene	ug/m3	ND	0.44	08/02/19 14:32	
m&p-Xylene	ug/m3	ND	0.88	08/02/19 14:32	
Methylene Chloride	ug/m3	ND	1.8	08/02/19 14:32	
n-Hexane	ug/m3	ND	0.36	08/02/19 14:32	
o-Xylene	ug/m3	ND	0.44	08/02/19 14:32	
Tetrachloroethene	ug/m3	ND	0.34	08/02/19 14:32	
Toluene	ug/m3	ND	0.38	08/02/19 14:32	
trans-1,2-Dichloroethene	ug/m3	ND	0.40	08/02/19 14:32	
Trichloroethene	ug/m3	ND	0.27	08/02/19 14:32	
Vinyl chloride	ug/m3	ND	0.13	08/02/19 14:32	

LABORATORY CONTROL SAMPLE: 3367353

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	56.6	60.9	108	70-130	
1,1-Dichloroethene	ug/m3	43.5	44.3	102	70-130	
1,2,4-Trimethylbenzene	ug/m3	53	55.9	105	70-134	
1,3,5-Trimethylbenzene	ug/m3	53.5	53.1	99	70-132	
2,2,4-Trimethylpentane	ug/m3	48.4	50.9	105	68-138	N2
2-Butanone (MEK)	ug/m3	32.4	32.5	100	70-130	
4-Ethyltoluene	ug/m3	52	54.1	104	70-138	
Acetone	ug/m3	26.6	21.2	80	67-130	
Benzene	ug/m3	34.4	34.6	101	70-130	
Carbon disulfide	ug/m3	32.9	36.5	111	56-137	
cis-1,2-Dichloroethene	ug/m3	41.9	43.9	105	70-130	
Dichlorodifluoromethane	ug/m3	52.8	52.4	99	70-130	
Ethylbenzene	ug/m3	45.5	45.6	100	67-131	
m&p-Xylene	ug/m3	45.9	54.7	119	70-132	

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QUALITY CONTROL DATA

Project: 2331 East Market St.

Pace Project No.: 10484857

LABORATORY CONTROL SAMPLE: 3367353

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/m3	38.1	33.3	87	65-130	
n-Hexane	ug/m3	37.6	35.1	93	66-130	
o-Xylene	ug/m3	44.1	47.9	109	70-130	
Tetrachloroethene	ug/m3	70.3	72.4	103	70-130	
Toluene	ug/m3	39.4	40.7	103	70-130	
trans-1,2-Dichloroethene	ug/m3	41.5	45.3	109	70-130	
Trichloroethene	ug/m3	56.3	60.6	108	70-130	
Vinyl chloride	ug/m3	28.1	28.4	101	70-130	

SAMPLE DUPLICATE: 3368553

Parameter	Units	10485558001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	ND	ND		25	
2,2,4-Trimethylpentane	ug/m3	ND	ND		25 N2	
2-Butanone (MEK)	ug/m3	ND	ND		25	
4-Ethyltoluene	ug/m3	ND	ND		25	
Acetone	ug/m3	8.5	8.7	3	25	
Benzene	ug/m3	0.53	0.51	3	25	
Carbon disulfide	ug/m3	ND	ND		25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
Dichlorodifluoromethane	ug/m3	2.2	2.3	2	25	
Ethylbenzene	ug/m3	ND	.73J		25	
m&p-Xylene	ug/m3	ND	1.2J		25	
Methylene Chloride	ug/m3	ND	5.2		25	
n-Hexane	ug/m3	1.1	1.1	6	25	
o-Xylene	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	ND	ND		25	
Toluene	ug/m3	1.4	1.4	3	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		25	

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QUALITY CONTROL DATA

Project: 2331 East Market St.

Pace Project No.: 10484857

QC Batch:	624608	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level
Associated Lab Samples:	10484857001, 10484857002, 10484857003, 10484857004, 10484857006, 10484857007, 10484857008, 10484857009		

METHOD BLANK:	3370989	Matrix:	Air
Associated Lab Samples:	10484857001, 10484857002, 10484857003, 10484857004, 10484857006, 10484857007, 10484857008, 10484857009		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.56	08/06/19 15:31	
1,1-Dichloroethene	ug/m3	ND	0.40	08/06/19 15:31	
1,2,4-Trimethylbenzene	ug/m3	ND	0.50	08/06/19 15:31	
1,3,5-Trimethylbenzene	ug/m3	ND	0.50	08/06/19 15:31	
2,2,4-Trimethylpentane	ug/m3	ND	1.2	08/06/19 15:31	N2
2-Butanone (MEK)	ug/m3	ND	1.5	08/06/19 15:31	
4-Ethyltoluene	ug/m3	ND	1.2	08/06/19 15:31	
Acetone	ug/m3	ND	1.2	08/06/19 15:31	
Benzene	ug/m3	ND	0.16	08/06/19 15:31	
Carbon disulfide	ug/m3	ND	0.32	08/06/19 15:31	
cis-1,2-Dichloroethene	ug/m3	ND	0.40	08/06/19 15:31	
Dichlorodifluoromethane	ug/m3	ND	0.50	08/06/19 15:31	
Ethylbenzene	ug/m3	ND	0.44	08/06/19 15:31	
m&p-Xylene	ug/m3	ND	0.88	08/06/19 15:31	
Methylene Chloride	ug/m3	ND	1.8	08/06/19 15:31	
n-Hexane	ug/m3	ND	0.36	08/06/19 15:31	
o-Xylene	ug/m3	ND	0.44	08/06/19 15:31	
Tetrachloroethene	ug/m3	ND	0.34	08/06/19 15:31	
Toluene	ug/m3	ND	0.38	08/06/19 15:31	
trans-1,2-Dichloroethene	ug/m3	ND	0.40	08/06/19 15:31	
Trichloroethene	ug/m3	ND	0.27	08/06/19 15:31	
Vinyl chloride	ug/m3	ND	0.13	08/06/19 15:31	

LABORATORY CONTROL SAMPLE: 3370990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	56.6	55.2	98	70-130	
1,1-Dichloroethene	ug/m3	43.5	39.5	91	70-130	
1,2,4-Trimethylbenzene	ug/m3	53	48.2	91	70-134	
1,3,5-Trimethylbenzene	ug/m3	53.5	49.6	93	70-132	
2,2,4-Trimethylpentane	ug/m3	48.4	44.2	91	68-138	N2
2-Butanone (MEK)	ug/m3	32.4	31.2	96	70-130	
4-Ethyltoluene	ug/m3	52	48.3	93	70-138	
Acetone	ug/m3	26.6	22.3	84	67-130	
Benzene	ug/m3	34.4	33.4	97	70-130	
Carbon disulfide	ug/m3	32.9	31.3	95	56-137	
cis-1,2-Dichloroethene	ug/m3	41.9	39.7	95	70-130	
Dichlorodifluoromethane	ug/m3	52.8	51.4	97	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 2331 East Market St.

Pace Project No.: 10484857

LABORATORY CONTROL SAMPLE: 3370990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/m3	45.5	40.6	89	67-131	
m&p-Xylene	ug/m3	45.9	45.1	98	70-132	
Methylene Chloride	ug/m3	38.1	36.3	95	65-130	
n-Hexane	ug/m3	37.6	35.4	94	66-130	
o-Xylene	ug/m3	44.1	41.4	94	70-130	
Tetrachloroethene	ug/m3	70.3	65.3	93	70-130	
Toluene	ug/m3	39.4	34.1	86	70-130	
trans-1,2-Dichloroethene	ug/m3	41.5	39.5	95	70-130	
Trichloroethene	ug/m3	56.3	52.1	93	70-130	
Vinyl chloride	ug/m3	28.1	26.9	96	70-130	

SAMPLE DUPLICATE: 3371626

Parameter	Units	10484857003 Result	Dup Result	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	.87J	25	
1,1-Dichloroethene	ug/m3	ND	ND	25	
1,2,4-Trimethylbenzene	ug/m3	ND	ND	25	
1,3,5-Trimethylbenzene	ug/m3	ND	ND	25	
2,2,4-Trimethylpentane	ug/m3	ND	ND	25 N2	
2-Butanone (MEK)	ug/m3	ND	2.6J	25	
4-Ethyltoluene	ug/m3	ND	ND	25	
Acetone	ug/m3	50.0	55.1	10	25
Benzene	ug/m3	0.55	0.55	1	25
Carbon disulfide	ug/m3	ND	.34J	25	
cis-1,2-Dichloroethene	ug/m3	92.8	95.0	2	25
Dichlorodifluoromethane	ug/m3	2.9	3.1	9	25
Ethylbenzene	ug/m3	ND	ND	25	
m&p-Xylene	ug/m3	ND	1.3J	25	
Methylene Chloride	ug/m3	8.0	7.8	3	25
n-Hexane	ug/m3	1.1	1J	25	
o-Xylene	ug/m3	ND	ND	25	
Tetrachloroethene	ug/m3	739	733	1	25
Toluene	ug/m3	2.6	2.4	6	25
trans-1,2-Dichloroethene	ug/m3	ND	.94J	25	
Trichloroethene	ug/m3	27.9	27.2	3	25
Vinyl chloride	ug/m3	ND	ND	25	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 2331 East Market St.

Pace Project No.: 10484857

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2331 East Market St.

Pace Project No.: 10484857

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10484857001	IA-001 (Pump Room)	TO-15	624608		
10484857002	IA-002 (Middle Room)	TO-15	624608		
10484857003	IA-003 (Below Dock)	TO-15	624608		
10484857004	IA-004 (Suite # 112)	TO-15	624608		
10484857005	IA-005 (Rest Room)	TO-15	623912		
10484857006	IA-006 (Vault)	TO-15	624608		
10484857007	IA-007 (Yoga)	TO-15	624608		
10484857008	IA-008 (Wis)	TO-15	624608		
10484857009	IA-009 (On the Dock)	TO-15	624608		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Air Sample Condition Upon Receipt
Document No.:
F-MN-A-106-rev.18

Document Revised: 31Jan2019
Page 1 of 1
Issuing Authority:
Pace Minnesota Quality Office

Air Sample Condition
Upon Receipt:

Client Name:
Sarva Bio

Project #:

WO# : 10484857

Courier: FedEx UPS USPS Client
 Pace SpeeDee Commercial See Exception

PM: NB3

Due Date: 08/09/19

CLIENT: Sarva Bio

Tracking Number: 7884 9117 2746, 2787, 2745

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Tin Can Other: _____ Temp Blank rec: Yes No

Temp. (TO17 and TO13 samples only) (°C): _____ Corrected Temp (°C): _____

Thermometer Used:

G87A9170600254

G87A9155100842

Temp should be above freezing to 6°C Correction Factor: _____

Date & Initials of Person Examining Contents: *WO 7/26/19*

Type of ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2. <i>No Client Info</i>
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	3.
Sampler Name and/or Signature on COC?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	10.
Media: <i>Air Can</i> Airbag Filter TDT Passive			11. Individually Certified Cans Y <input type="checkbox"/> N <i>(list which samples)</i>
Is sufficient information available to reconcile samples to the COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	12.
Do cans need to be pressurized (3C and ASTM 1946 DO NOT PRESSURIZE)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	13.

Samples Received:

Pressure Gauge # 10AIR34 10AIR35

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
IA -001	1697	0868	-3	+5	IA -009	8105	1102	-4	+5
-002	0622	1064	-3	"					
-003	3675	0857	-3	"					
-004	3357	1090	-2	"					
-005	2175	0139	-4	"					
-006	1194	1051	-2	"					
-007	0937	0403	-2	"					
-008	1251	1071	-10	"					

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Project Manager Review: *Caroline Hunt*

Date: 7/29/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of date, incorrect preservative, out-of-temp, incorrect containers).

July 11, 2019

Steve Vedder
Environmental Products & Services of Vermont,
Inc.
1539 Bobali Drive
Harrisburg, PA 17104

RE: Project: Plaza 2331
Pace Project No.: 10480628

Dear Steve Vedder:

Enclosed are the analytical results for sample(s) received by the laboratory on June 25, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nathan Boberg
nathan.boberg@pacelabs.com
(612)360-0728
Project Manager

Enclosures

cc: Satya Ganti, Sarva Bio Remed, LLC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plaza 2331
 Pace Project No.: 10480628

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
 A2LA Certification #: 2926.01
 Alabama Certification #: 40770
 Alaska Contaminated Sites Certification #: 17-009
 Alaska DW Certification #: MN00064
 Arizona Certification #: AZ0014
 Arkansas DW Certification #: MN00064
 Arkansas WW Certification #: 88-0680
 California Certification #: 2929
 CNMI Saipan Certification #: MP0003
 Colorado Certification #: MN00064
 Connecticut Certification #: PH-0256
 EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
 Florida Certification #: E87605
 Georgia Certification #: 959
 Guam EPA Certification #: MN00064
 Hawaii Certification #: MN00064
 Idaho Certification #: MN00064
 Illinois Certification #: 200011
 Indiana Certification #: C-MN-01
 Iowa Certification #: 368
 Kansas Certification #: E-10167
 Kentucky DW Certification #: 90062
 Kentucky WW Certification #: 90062
 Louisiana DEQ Certification #: 03086
 Louisiana DW Certification #: MN00064
 Maine Certification #: MN00064
 Maryland Certification #: 322
 Massachusetts Certification #: M-MN064
 Michigan Certification #: 9909
 Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137
 Minnesota Petrofund Certification #: 1240
 Mississippi Certification #: MN00064
 Missouri Certification #: 10100
 Montana Certification #: CERT0092
 Nebraska Certification #: NE-OS-18-06
 Nevada Certification #: MN00064
 New Hampshire Certification #: 2081
 New Jersey Certification #: MN002
 New York Certification #: 11647
 North Carolina DW Certification #: 27700
 North Carolina WW Certification #: 530
 North Dakota Certification #: R-036
 Ohio DW Certification #: 41244
 Ohio VAP Certification #: CL101
 Oklahoma Certification #: 9507
 Oregon Primary Certification #: MN300001
 Oregon Secondary Certification #: MN200001
 Pennsylvania Certification #: 68-00563
 Puerto Rico Certification #: MN00064
 South Carolina Certification #: 74003001
 Tennessee Certification #: TN02818
 Texas Certification #: T104704192
 Utah Certification #: MN00064
 Vermont Certification #: VT-027053137
 Virginia Certification #: 460163
 Washington Certification #: C486
 West Virginia DEP Certification #: 382
 West Virginia DW Certification #: 9952 C
 Wisconsin Certification #: 999407970
 Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plaza 2331
Pace Project No.: 10480628

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10480628001	EPS-SG-101	Air	06/18/19 15:12	06/25/19 09:50
10480628002	EPS-SG-102	Air	06/18/19 15:54	06/25/19 09:50
10480628003	EPS-SG-103	Air	06/18/19 15:24	06/25/19 09:50
10480628004	EPS-SG-104	Air	06/18/19 15:55	06/25/19 09:50
10480628005	EPS-SG-105	Air	06/18/19 16:23	06/25/19 09:50
10480628006	EPS-SG-106	Air	06/18/19 16:57	06/25/19 09:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plaza 2331
Pace Project No.: 10480628

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10480628001	EPS-SG-101	Method 3C Gases	MG2	1
		TO-15	MJL	22
10480628002	EPS-SG-102	Method 3C Gases	MG2	1
		TO-15	MLS	22
10480628003	EPS-SG-103	Method 3C Gases	MG2	1
		TO-15	MJL	22
10480628004	EPS-SG-104	Method 3C Gases	MG2	1
		TO-15	MJL	22
10480628005	EPS-SG-105	Method 3C Gases	MG2	1
		TO-15	MJL	22
10480628006	EPS-SG-106	Method 3C Gases	MG2	1
		TO-15	MLS	22

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Plaza 2331

Pace Project No.: 10480628

Method: Method 3C Gases

Description: Method 3C AIR - Fixed Gases

Client: Sarva Bio Remed, LLC

Date: July 11, 2019

General Information:

6 samples were analyzed for Method 3C Gases. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 616579

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- EPS-SG-101 (Lab ID: 10480628001)
 - Helium
- EPS-SG-102 (Lab ID: 10480628002)
 - Helium
- EPS-SG-103 (Lab ID: 10480628003)
 - Helium
- EPS-SG-104 (Lab ID: 10480628004)
 - Helium
- EPS-SG-105 (Lab ID: 10480628005)
 - Helium
- EPS-SG-106 (Lab ID: 10480628006)
 - Helium

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Plaza 2331
Pace Project No.: 10480628

Method: TO-15
Description: TO15 MSV AIR
Client: Sarva Bio Remed, LLC
Date: July 11, 2019

General Information:

6 samples were analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 618237

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3338555)
- 2,2,4-Trimethylpentane
- EPS-SG-103 (Lab ID: 10480628003)
- 2,2,4-Trimethylpentane
- LCS (Lab ID: 3338556)
- 2,2,4-Trimethylpentane

QC Batch: 618505

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3340048)
- 2,2,4-Trimethylpentane
- EPS-SG-101 (Lab ID: 10480628001)
- 2,2,4-Trimethylpentane
- EPS-SG-102 (Lab ID: 10480628002)
- 2,2,4-Trimethylpentane

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Plaza 2331

Pace Project No.: 10480628

Method: TO-15

Description: TO15 MSV AIR

Client: Sarva Bio Remed, LLC

Date: July 11, 2019

Analyte Comments:

QC Batch: 618505

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- EPS-SG-104 (Lab ID: 10480628004)
 - 2,2,4-Trimethylpentane
- EPS-SG-105 (Lab ID: 10480628005)
 - 2,2,4-Trimethylpentane
- EPS-SG-106 (Lab ID: 10480628006)
 - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3340049)
 - 2,2,4-Trimethylpentane

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plaza 2331
Pace Project No.: 10480628

Sample: EPS-SG-101	Lab ID: 10480628001	Collected: 06/18/19 15:12	Received: 06/25/19 09:50	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Method 3C AIR - Fixed Gases	Analytical Method: Method 3C Gases							
Helium	ND	%	3.6	1		06/30/19 10:27	7440-59-7	N2
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	ND	ug/m3	2240	931.2		07/10/19 13:33	67-64-1	
Benzene	ND	ug/m3	303	931.2		07/10/19 13:33	71-43-2	
2-Butanone (MEK)	ND	ug/m3	2790	931.2		07/10/19 13:33	78-93-3	
Carbon disulfide	ND	ug/m3	589	931.2		07/10/19 13:33	75-15-0	
Dichlorodifluoromethane	ND	ug/m3	941	931.2		07/10/19 13:33	75-71-8	
1,1-Dichloroethene	ND	ug/m3	751	931.2		07/10/19 13:33	75-35-4	
cis-1,2-Dichloroethene	82700	ug/m3	751	931.2		07/10/19 13:33	156-59-2	
trans-1,2-Dichloroethene	1850	ug/m3	751	931.2		07/10/19 13:33	156-60-5	
Ethylbenzene	ND	ug/m3	822	931.2		07/10/19 13:33	100-41-4	
4-Ethyltoluene	ND	ug/m3	2330	931.2		07/10/19 13:33	622-96-8	
n-Hexane	ND	ug/m3	667	931.2		07/10/19 13:33	110-54-3	
Methylene Chloride	ND	ug/m3	3290	931.2		07/10/19 13:33	75-09-2	
Tetrachloroethene	29000	ug/m3	642	931.2		07/10/19 13:33	127-18-4	
Toluene	ND	ug/m3	713	931.2		07/10/19 13:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	1030	931.2		07/10/19 13:33	71-55-6	
Trichloroethene	7280	ug/m3	508	931.2		07/10/19 13:33	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	930	931.2		07/10/19 13:33	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	930	931.2		07/10/19 13:33	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	2210	931.2		07/10/19 13:33	540-84-1	N2
Vinyl chloride	4680	ug/m3	242	931.2		07/10/19 13:33	75-01-4	
m&p-Xylene	ND	ug/m3	1650	931.2		07/10/19 13:33	179601-23-1	
o-Xylene	ND	ug/m3	822	931.2		07/10/19 13:33	95-47-6	

Sample: EPS-SG-102	Lab ID: 10480628002	Collected: 06/18/19 15:54	Received: 06/25/19 09:50	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Method 3C AIR - Fixed Gases	Analytical Method: Method 3C Gases							
Helium	ND	%	3.6	1		06/30/19 10:52	7440-59-7	N2
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	346	ug/m3	12.4	5.16		07/10/19 21:49	67-64-1	
Benzene	2.3	ug/m3	1.7	5.16		07/10/19 21:49	71-43-2	
2-Butanone (MEK)	ND	ug/m3	15.5	5.16		07/10/19 21:49	78-93-3	
Carbon disulfide	6.5	ug/m3	3.3	5.16		07/10/19 21:49	75-15-0	
Dichlorodifluoromethane	13.4	ug/m3	5.2	5.16		07/10/19 21:49	75-71-8	
1,1-Dichloroethene	ND	ug/m3	4.2	5.16		07/10/19 21:49	75-35-4	
cis-1,2-Dichloroethene	29.6	ug/m3	4.2	5.16		07/10/19 21:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	4.2	5.16		07/10/19 21:49	156-60-5	
Ethylbenzene	12.0	ug/m3	4.6	5.16		07/10/19 21:49	100-41-4	
4-Ethyltoluene	ND	ug/m3	12.9	5.16		07/10/19 21:49	622-96-8	
n-Hexane	50.7	ug/m3	6.2	8.68		07/11/19 10:50	110-54-3	

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ANALYTICAL RESULTS

Project: Plaza 2331
Pace Project No.: 10480628

Sample: EPS-SG-102	Lab ID: 10480628002	Collected: 06/18/19 15:54	Received: 06/25/19 09:50	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Methylene Chloride	915	ug/m3	30.6	8.68		07/11/19 10:50	75-09-2	
Tetrachloroethene	486	ug/m3	3.6	5.16		07/10/19 21:49	127-18-4	
Toluene	122	ug/m3	4.0	5.16		07/10/19 21:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	5.7	5.16		07/10/19 21:49	71-55-6	
Trichloroethene	15.1	ug/m3	2.8	5.16		07/10/19 21:49	79-01-6	
1,2,4-Trimethylbenzene	8.2	ug/m3	5.2	5.16		07/10/19 21:49	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	5.2	5.16		07/10/19 21:49	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	12.2	5.16		07/10/19 21:49	540-84-1	N2
Vinyl chloride	ND	ug/m3	1.3	5.16		07/10/19 21:49	75-01-4	
m&p-Xylene	16.2	ug/m3	9.1	5.16		07/10/19 21:49	179601-23-1	
o-Xylene	4.8	ug/m3	4.6	5.16		07/10/19 21:49	95-47-6	
Sample: EPS-SG-103	Lab ID: 10480628003	Collected: 06/18/19 15:24	Received: 06/25/19 09:50	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Method 3C AIR - Fixed Gases	Analytical Method: Method 3C Gases							
Helium	ND	%	3.6	1		06/30/19 11:03	7440-59-7	N2
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	38.6	ug/m3	4.7	1.94		07/09/19 20:44	67-64-1	
Benzene	ND	ug/m3	0.63	1.94		07/09/19 20:44	71-43-2	
2-Butanone (MEK)	11.2	ug/m3	5.8	1.94		07/09/19 20:44	78-93-3	
Carbon disulfide	8.6	ug/m3	1.2	1.94		07/09/19 20:44	75-15-0	
Dichlorodifluoromethane	ND	ug/m3	2.0	1.94		07/09/19 20:44	75-71-8	
1,1-Dichloroethene	ND	ug/m3	1.6	1.94		07/09/19 20:44	75-35-4	
cis-1,2-Dichloroethene	10.5	ug/m3	1.6	1.94		07/09/19 20:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.6	1.94		07/09/19 20:44	156-60-5	
Ethylbenzene	2.1	ug/m3	1.7	1.94		07/09/19 20:44	100-41-4	
4-Ethyltoluene	ND	ug/m3	4.8	1.94		07/09/19 20:44	622-96-8	
n-Hexane	4.0	ug/m3	1.4	1.94		07/09/19 20:44	110-54-3	
Methylene Chloride	64.9	ug/m3	6.8	1.94		07/09/19 20:44	75-09-2	
Tetrachloroethene	5180	ug/m3	40.1	58.2		07/10/19 11:52	127-18-4	
Toluene	4.8	ug/m3	1.5	1.94		07/09/19 20:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	2.2	1.94		07/09/19 20:44	71-55-6	
Trichloroethene	44.4	ug/m3	1.1	1.94		07/09/19 20:44	79-01-6	
1,2,4-Trimethylbenzene	5.8	ug/m3	1.9	1.94		07/09/19 20:44	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.9	1.94		07/09/19 20:44	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	4.6	1.94		07/09/19 20:44	540-84-1	N2
Vinyl chloride	ND	ug/m3	0.50	1.94		07/09/19 20:44	75-01-4	
m&p-Xylene	6.1	ug/m3	3.4	1.94		07/09/19 20:44	179601-23-1	
o-Xylene	2.7	ug/m3	1.7	1.94		07/09/19 20:44	95-47-6	

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ANALYTICAL RESULTS

Project: Plaza 2331
Pace Project No.: 10480628

Sample: EPS-SG-104	Lab ID: 10480628004	Collected: 06/18/19 15:55	Received: 06/25/19 09:50	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Method 3C AIR - Fixed Gases	Analytical Method: Method 3C Gases							
Helium	ND	%	3.6	1		06/30/19 11:15	7440-59-7	N2
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	ND	ug/m3	1190	494.4		07/10/19 13:08	67-64-1	
Benzene	ND	ug/m3	161	494.4		07/10/19 13:08	71-43-2	
2-Butanone (MEK)	ND	ug/m3	1480	494.4		07/10/19 13:08	78-93-3	
Carbon disulfide	ND	ug/m3	313	494.4		07/10/19 13:08	75-15-0	
Dichlorodifluoromethane	ND	ug/m3	499	494.4		07/10/19 13:08	75-71-8	
1,1-Dichloroethene	ND	ug/m3	398	494.4		07/10/19 13:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	398	494.4		07/10/19 13:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	398	494.4		07/10/19 13:08	156-60-5	
Ethylbenzene	ND	ug/m3	437	494.4		07/10/19 13:08	100-41-4	
4-Ethyltoluene	ND	ug/m3	1240	494.4		07/10/19 13:08	622-96-8	
n-Hexane	ND	ug/m3	354	494.4		07/10/19 13:08	110-54-3	
Methylene Chloride	ND	ug/m3	1750	494.4		07/10/19 13:08	75-09-2	
Tetrachloroethene	102000	ug/m3	341	494.4		07/10/19 13:08	127-18-4	
Toluene	ND	ug/m3	379	494.4		07/10/19 13:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	549	494.4		07/10/19 13:08	71-55-6	
Trichloroethene	322	ug/m3	270	494.4		07/10/19 13:08	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	494	494.4		07/10/19 13:08	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	494	494.4		07/10/19 13:08	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	1170	494.4		07/10/19 13:08	540-84-1	N2
Vinyl chloride	ND	ug/m3	129	494.4		07/10/19 13:08	75-01-4	
m&p-Xylene	ND	ug/m3	875	494.4		07/10/19 13:08	179601-23-1	
o-Xylene	ND	ug/m3	437	494.4		07/10/19 13:08	95-47-6	

Sample: EPS-SG-105	Lab ID: 10480628005	Collected: 06/18/19 16:23	Received: 06/25/19 09:50	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Method 3C AIR - Fixed Gases	Analytical Method: Method 3C Gases							
Helium	ND	%	3.6	1		06/30/19 11:28	7440-59-7	N2
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	80.5	ug/m3	16.4	6.79		07/10/19 12:18	67-64-1	
Benzene	ND	ug/m3	2.2	6.79		07/10/19 12:18	71-43-2	
2-Butanone (MEK)	ND	ug/m3	20.4	6.79		07/10/19 12:18	78-93-3	
Carbon disulfide	8.0	ug/m3	4.3	6.79		07/10/19 12:18	75-15-0	
Dichlorodifluoromethane	ND	ug/m3	6.9	6.79		07/10/19 12:18	75-71-8	
1,1-Dichloroethene	ND	ug/m3	5.5	6.79		07/10/19 12:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	5.5	6.79		07/10/19 12:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	5.5	6.79		07/10/19 12:18	156-60-5	
Ethylbenzene	ND	ug/m3	6.0	6.79		07/10/19 12:18	100-41-4	
4-Ethyltoluene	ND	ug/m3	17.0	6.79		07/10/19 12:18	622-96-8	
n-Hexane	30.9	ug/m3	4.9	6.79		07/10/19 12:18	110-54-3	

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ANALYTICAL RESULTS

Project: Plaza 2331
Pace Project No.: 10480628

Sample: EPS-SG-105	Lab ID: 10480628005	Collected: 06/18/19 16:23	Received: 06/25/19 09:50	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Methylene Chloride	309	ug/m3	24.0	6.79		07/10/19 12:18	75-09-2	
Tetrachloroethene	609	ug/m3	4.7	6.79		07/10/19 12:18	127-18-4	
Toluene	7.4	ug/m3	5.2	6.79		07/10/19 12:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	7.5	6.79		07/10/19 12:18	71-55-6	
Trichloroethene	31.1	ug/m3	3.7	6.79		07/10/19 12:18	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	6.8	6.79		07/10/19 12:18	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	6.8	6.79		07/10/19 12:18	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	16.1	6.79		07/10/19 12:18	540-84-1	N2
Vinyl chloride	ND	ug/m3	1.8	6.79		07/10/19 12:18	75-01-4	
m&p-Xylene	ND	ug/m3	12.0	6.79		07/10/19 12:18	179601-23-1	
o-Xylene	ND	ug/m3	6.0	6.79		07/10/19 12:18	95-47-6	
<hr/>								
Sample: EPS-SG-106	Lab ID: 10480628006	Collected: 06/18/19 16:57	Received: 06/25/19 09:50	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Method 3C AIR - Fixed Gases	Analytical Method: Method 3C Gases							
Helium	ND	%	3.6	1		06/30/19 11:39	7440-59-7	N2
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	ND	ug/m3	56000	23224		07/10/19 13:58	67-64-1	
Benzene	ND	ug/m3	7550	23224		07/10/19 13:58	71-43-2	
2-Butanone (MEK)	ND	ug/m3	69700	23224		07/10/19 13:58	78-93-3	
Carbon disulfide	ND	ug/m3	14700	23224		07/10/19 13:58	75-15-0	
Dichlorodifluoromethane	ND	ug/m3	23500	23224		07/10/19 13:58	75-71-8	
1,1-Dichloroethene	ND	ug/m3	18700	23224		07/10/19 13:58	75-35-4	
cis-1,2-Dichloroethene	848000	ug/m3	18700	23224		07/10/19 13:58	156-59-2	
trans-1,2-Dichloroethene	22300	ug/m3	18700	23224		07/10/19 13:58	156-60-5	
Ethylbenzene	ND	ug/m3	20500	23224		07/10/19 13:58	100-41-4	
4-Ethyltoluene	ND	ug/m3	58100	23224		07/10/19 13:58	622-96-8	
n-Hexane	ND	ug/m3	16600	23224		07/10/19 13:58	110-54-3	
Methylene Chloride	ND	ug/m3	82000	23224		07/10/19 13:58	75-09-2	
Tetrachloroethene	1570000	ug/m3	16000	23224		07/10/19 13:58	127-18-4	
Toluene	ND	ug/m3	17800	23224		07/10/19 13:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/m3	25800	23224		07/10/19 13:58	71-55-6	
Trichloroethene	332000	ug/m3	12700	23224		07/10/19 13:58	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	23200	23224		07/10/19 13:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	23200	23224		07/10/19 13:58	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	55000	23224		07/10/19 13:58	540-84-1	N2
Vinyl chloride	681000	ug/m3	6040	23224		07/10/19 13:58	75-01-4	
m&p-Xylene	ND	ug/m3	41100	23224		07/10/19 13:58	179601-23-1	
o-Xylene	ND	ug/m3	20500	23224		07/10/19 13:58	95-47-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plaza 2331
Pace Project No.: 10480628

QC Batch:	616579	Analysis Method:	Method 3C Gases
QC Batch Method:	Method 3C Gases	Analysis Description:	METHOD 3C AIR - FIXED GASES
Associated Lab Samples:	10480628001, 10480628002, 10480628003, 10480628004, 10480628005, 10480628006		

METHOD BLANK: 3330958 Matrix: Air

Associated Lab Samples: 10480628001, 10480628002, 10480628003, 10480628004, 10480628005, 10480628006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Helium	%	ND	3.6	06/30/19 10:13	

LABORATORY CONTROL SAMPLE & LCSD: 3330959

3331025

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Helium	%	18	19.8	18.8	110	104	70-130	5	30	

SAMPLE DUPLICATE: 3331026

Parameter	Units	10480628001 Result	Dup Result	RPD	Max RPD	Qualifiers
Helium	%	ND	ND		30	

SAMPLE DUPLICATE: 3331027

Parameter	Units	10480852003 Result	Dup Result	RPD	Max RPD	Qualifiers
Helium	%	ND	ND		30	

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QUALITY CONTROL DATA

Project: Plaza 2331

Pace Project No.: 10480628

QC Batch: 618237

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: TO15 MSV AIR Low Level

Associated Lab Samples: 10480628003

METHOD BLANK: 3338555

Matrix: Air

Associated Lab Samples: 10480628003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.56	07/09/19 08:26	
1,1-Dichloroethene	ug/m3	ND	0.40	07/09/19 08:26	
1,2,4-Trimethylbenzene	ug/m3	ND	0.50	07/09/19 08:26	
1,3,5-Trimethylbenzene	ug/m3	ND	0.50	07/09/19 08:26	
2,2,4-Trimethylpentane	ug/m3	ND	1.2	07/09/19 08:26	N2
2-Butanone (MEK)	ug/m3	ND	1.5	07/09/19 08:26	
4-Ethyltoluene	ug/m3	ND	1.2	07/09/19 08:26	
Acetone	ug/m3	ND	1.2	07/09/19 08:26	
Benzene	ug/m3	ND	0.16	07/09/19 08:26	
Carbon disulfide	ug/m3	ND	0.32	07/09/19 08:26	
cis-1,2-Dichloroethene	ug/m3	ND	0.40	07/09/19 08:26	
Dichlorodifluoromethane	ug/m3	ND	0.50	07/09/19 08:26	
Ethylbenzene	ug/m3	ND	0.44	07/09/19 08:26	
m&p-Xylene	ug/m3	ND	0.88	07/09/19 08:26	
Methylene Chloride	ug/m3	ND	1.8	07/09/19 08:26	
n-Hexane	ug/m3	ND	0.36	07/09/19 08:26	
o-Xylene	ug/m3	ND	0.44	07/09/19 08:26	
Tetrachloroethene	ug/m3	ND	0.34	07/09/19 08:26	
Toluene	ug/m3	ND	0.38	07/09/19 08:26	
trans-1,2-Dichloroethene	ug/m3	ND	0.40	07/09/19 08:26	
Trichloroethene	ug/m3	ND	0.27	07/09/19 08:26	
Vinyl chloride	ug/m3	ND	0.13	07/09/19 08:26	

LABORATORY CONTROL SAMPLE: 3338556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	59.0	106	70-130	
1,1-Dichloroethene	ug/m3	40.3	36.3	90	70-130	
1,2,4-Trimethylbenzene	ug/m3	50	53.9	108	70-134	
1,3,5-Trimethylbenzene	ug/m3	50	55.2	110	70-132	
2,2,4-Trimethylpentane	ug/m3	47.5	50.2	106	68-138	N2
2-Butanone (MEK)	ug/m3	30	37.6	126	70-130	
4-Ethyltoluene	ug/m3	50	58.8	118	70-138	
Acetone	ug/m3	121	94.5	78	67-130	
Benzene	ug/m3	32.5	33.9	104	70-130	
Carbon disulfide	ug/m3	31.6	31.6	100	56-137	
cis-1,2-Dichloroethene	ug/m3	40.3	42.8	106	70-130	
Dichlorodifluoromethane	ug/m3	50.3	51.0	101	70-130	
Ethylbenzene	ug/m3	44.1	49.4	112	67-131	
m&p-Xylene	ug/m3	88.3	98.5	112	70-132	

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QUALITY CONTROL DATA

Project: Plaza 2331
 Pace Project No.: 10480628

LABORATORY CONTROL SAMPLE: 3338556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/m ³	177	181	103	65-130	
n-Hexane	ug/m ³	35.8	36.2	101	66-130	
o-Xylene	ug/m ³	44.1	48.7	110	70-130	
Tetrachloroethene	ug/m ³	68.9	73.6	107	70-130	
Toluene	ug/m ³	38.3	40.4	105	70-130	
trans-1,2-Dichloroethene	ug/m ³	40.3	42.9	106	70-130	
Trichloroethene	ug/m ³	54.6	56.1	103	70-130	
Vinyl chloride	ug/m ³	26	24.2	93	70-130	

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QUALITY CONTROL DATA

Project: Plaza 2331

Pace Project No.: 10480628

QC Batch: 618505

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: TO15 MSV AIR Low Level

Associated Lab Samples: 10480628001, 10480628002, 10480628004, 10480628005, 10480628006

METHOD BLANK: 3340048

Matrix: Air

Associated Lab Samples: 10480628001, 10480628002, 10480628004, 10480628005, 10480628006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.56	07/10/19 11:28	
1,1-Dichloroethene	ug/m3	ND	0.40	07/10/19 11:28	
1,2,4-Trimethylbenzene	ug/m3	ND	0.50	07/10/19 11:28	
1,3,5-Trimethylbenzene	ug/m3	ND	0.50	07/10/19 11:28	
2,2,4-Trimethylpentane	ug/m3	ND	1.2	07/10/19 11:28	N2
2-Butanone (MEK)	ug/m3	ND	1.5	07/10/19 11:28	
4-Ethyltoluene	ug/m3	ND	1.2	07/10/19 11:28	
Acetone	ug/m3	ND	1.2	07/10/19 11:28	
Benzene	ug/m3	ND	0.16	07/10/19 11:28	
Carbon disulfide	ug/m3	ND	0.32	07/10/19 11:28	
cis-1,2-Dichloroethene	ug/m3	ND	0.40	07/10/19 11:28	
Dichlorodifluoromethane	ug/m3	ND	0.50	07/10/19 11:28	
Ethylbenzene	ug/m3	ND	0.44	07/10/19 11:28	
m&p-Xylene	ug/m3	ND	0.88	07/10/19 11:28	
Methylene Chloride	ug/m3	ND	1.8	07/10/19 11:28	
n-Hexane	ug/m3	ND	0.36	07/10/19 11:28	
o-Xylene	ug/m3	ND	0.44	07/10/19 11:28	
Tetrachloroethene	ug/m3	ND	0.34	07/10/19 11:28	
Toluene	ug/m3	ND	0.38	07/10/19 11:28	
trans-1,2-Dichloroethene	ug/m3	ND	0.40	07/10/19 11:28	
Trichloroethene	ug/m3	ND	0.27	07/10/19 11:28	
Vinyl chloride	ug/m3	ND	0.13	07/10/19 11:28	

LABORATORY CONTROL SAMPLE: 3340049

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	56.6	51.0	90	70-130	
1,1-Dichloroethene	ug/m3	43.5	35.7	82	70-130	
1,2,4-Trimethylbenzene	ug/m3	53	51.5	97	70-134	
1,3,5-Trimethylbenzene	ug/m3	53.5	50.4	94	70-132	
2,2,4-Trimethylpentane	ug/m3	48.4	41.6	86	68-138	N2
2-Butanone (MEK)	ug/m3	32.4	23.5	72	70-130	
4-Ethyltoluene	ug/m3	52	50.7	98	70-138	
Acetone	ug/m3	26.6	21.4	81	67-130	
Benzene	ug/m3	34.4	29.0	84	70-130	
Carbon disulfide	ug/m3	32.9	29.1	88	56-137	
cis-1,2-Dichloroethene	ug/m3	41.9	36.8	88	70-130	
Dichlorodifluoromethane	ug/m3	52.8	47.0	89	70-130	
Ethylbenzene	ug/m3	45.5	41.8	92	67-131	
m&p-Xylene	ug/m3	45.9	46.8	102	70-132	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plaza 2331
 Pace Project No.: 10480628

LABORATORY CONTROL SAMPLE: 3340049

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/m ³	38.1	35.6	93	65-130	
n-Hexane	ug/m ³	37.6	29.8	79	66-130	
o-Xylene	ug/m ³	44.1	41.6	94	70-130	
Tetrachloroethene	ug/m ³	70.3	62.5	89	70-130	
Toluene	ug/m ³	39.4	34.4	87	70-130	
trans-1,2-Dichloroethene	ug/m ³	41.5	37.1	89	70-130	
Trichloroethene	ug/m ³	56.3	49.8	88	70-130	
Vinyl chloride	ug/m ³	28.1	24.4	87	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plaza 2331
Pace Project No.: 10480628

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plaza 2331
Pace Project No.: 10480628

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10480628001	EPS-SG-101	Method 3C Gases	616579		
10480628002	EPS-SG-102	Method 3C Gases	616579		
10480628003	EPS-SG-103	Method 3C Gases	616579		
10480628004	EPS-SG-104	Method 3C Gases	616579		
10480628005	EPS-SG-105	Method 3C Gases	616579		
10480628006	EPS-SG-106	Method 3C Gases	616579		
10480628001	EPS-SG-101	TO-15	618505		
10480628002	EPS-SG-102	TO-15	618505		
10480628003	EPS-SG-103	TO-15	618237		
10480628004	EPS-SG-104	TO-15	618505		
10480628005	EPS-SG-105	TO-15	618505		
10480628006	EPS-SG-106	TO-15	618505		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Air Sample Condition Upon Receipt
Document No.:
F-MN-A-106-rev.18

Document Revised: 31Jan2019
Page 1 of 1
Issuing Authority:
Pace Minnesota Quality Office

Air Sample Condition
Upon Receipt

Client Name: Sarva Bio

Project #:

WO# : 10480628

PM: NB3 Due Date: 07/10/19
CLIENT: Sarva Bio

Courier: FedEx UPS USPS Client
 Pace SpeeDee Commercial See Exception

Tracking Number: 451599128966

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Tin Can Other: _____ Temp Blank rec: Yes No

Temp. (TO17 and TO13 samples only) (°C): - Corrected Temp (°C): -

Thermometer Used: G87A9170600254
 G87A9155100842

Temp should be above freezing to 6°C Correction Factor: -

Date & Initials of Person Examining Contents: KL 6/25/19

Type of ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Media: <input checked="" type="checkbox"/> Air Can <input type="checkbox"/> Airbag <input type="checkbox"/> Filter <input type="checkbox"/> TDT <input type="checkbox"/> Passive	11. Individually Certified Cans Y <input checked="" type="checkbox"/> N (list which samples)	
Is sufficient information available to reconcile samples to the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
Do cans need to be pressurized (3C and ASTM 1946 DO NOT PRESSURIZE)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	13. 3C

Samples Received:					Pressure Gauge # <input type="checkbox"/> 10AIR34 <input type="checkbox"/> 10AIR35				
Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
101	1785	0207	-4						
102	2541	0530	-2,5						
103	3625	0742	-4						
104	3166	1373	-5,5						
105	2785	0376	-5						
106	3155	1906	-2						

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____

Date: 6/25/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Table 1
Summary of IAQ Analytical Data
 Plaza 2331 Site
 2331 East Market Street
 Springettsbury Township, York County, Pennsylvania

Sample Identification		Target Compounds	Acetone	Benzene	cis 1,2-Dichloroethylene	Dichlorodifluoromethane	Ethylbenzene	Methylene Chloride	n-Hexane	Toluene	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	Vinyl Chloride	Xylenes (total)
			Non-Residential Indoor Air ¹	140,000	16	260	440	49	68	NS	22,000	180	8.8	14
Media	Date Collected													
IA-001 (Pump Room)	Indoor Air	4/4/2019	10.3	0.80	38.9	2.1	ND (1.2)	ND (4.9)	ND (1.0)	2.3	188	9.3	0.64	ND (2.5)
	Indoor Air	4/18/2019	20.9	ND (0.46)	57.6	2.5	ND (1.2)	7.4	1.2	1.3	273	11.2	ND (0.37)	1.3
	Indoor Air	7/24/2019	55.2	0.55	86.5	3.0	ND (1.3)	ND (5.3)	ND (1.1)	3.3	700	26.8	ND (.039)	ND (2.6)
IA-002 (G Middle Room)	Indoor Air	4/4/2019	10.2	0.74	38.0	2.2	ND (1.2)	ND (5.0)	ND (1.0)	1.8	190	9.0	ND (0.37)	ND (2.5)
	Indoor Air	7/24/2019	56.0	0.49	79.3	2.8	4.1	ND (5.3)	1.1	2.7	603	23.4	ND (0.39)	26.1
IA-003 (Below Dock)	Indoor Air	4/4/2019	12.6	0.70	40.8	2.3	ND (1.2)	ND (5.0)	ND (1.0)	2.4	188	9.0	0.70	ND (2.5)
	Indoor Air	7/24/2019	50.0	0.55	92.8	2.9	ND (1.3)	8.0	1.1	2.6	739	27.9	ND (0.39)	ND (2.6)
IA-004 (Suite H2)	Indoor Air	4/4/2019	12.6	0.72	34.6	2.2	ND (1.3)	ND (5.1)	ND (1.0)	3.4	160	7.8	0.55	2.0
	Indoor Air	7/24/2019	105	0.58	74.6	2.7	ND (1.3)	6.8	1.3	3.2	607	22.6	ND (0.37)	ND (2.5)
IA-005 (R.R.)	Indoor Air	4/4/2019	14.9	0.81	31.5	2.4	ND (1.2)	ND (4.7)	1.2	8.9	146	7.2	0.41	2.1
	Indoor Air	7/24/2019	64.5	0.64	61.0	2.5	ND (1.4)	ND (5.5)	ND (1.1)	2.5	818	18.9	ND (0.40)	ND (2.7)
IA-006 (Vault)	Indoor Air	4/4/2019	20.6	0.79	23.3	2.2	ND (1.6)	12.1	2.7	12.8	117	5.7	ND (0.48)	2.1
	Indoor Air	7/24/2019	56.9	0.70	60.9	2.9	ND (1.3)	5.7	ND (1.0)	3.4	439	19.1	ND (0.37)	ND (2.5)
IA-007 (H3-YOGA)	Indoor Air	4/4/2019	16.7	0.88	38.6	2.5	ND (1.3)	ND (5.2)	ND (1.0)	2.6	183	8.3	0.59	3.3
	Indoor Air	7/24/2019	77.6	0.68	75.2	3.1	ND (1.3)	ND (5.1)	ND (1.0)	3.7	545	22.7	ND (0.37)	ND (2.5)
IA-008 (WIS)	Indoor Air	4/4/2019	16.2	0.87	38.8	2.4	ND (1.3)	ND (5.1)	ND (1.0)	3.1	196	8.3	ND (0.37)	5.3
	Indoor Air	7/24/2019	73.7	0.85	76.7	3.1	ND (1.8)	ND (7.1)	ND (1.4)	3.8	524	22.8	ND (0.2)	ND (3.6)
IA-009 (F-Warehouse)	Indoor Air	4/18/2019	32.0	ND (0.73)	14.1	2.4	ND (2.0)	ND (7.9)	ND (1.6)	ND (1.7)	75.2	2.8	ND (0.58)	ND (4.0)
IA-010 (D-Jeweler Sho)	Indoor Air	4/18/2019	133	0.50	1.4	2.2	ND (1.3)	ND (5.2)	ND (1.0)	2.4	7.7	ND (0.80)	ND (0.38)	ND (2.6)
IA-011 (Rest Room-B)	Indoor Air	4/18/2019	42.8	0.54	7.0	2.3	ND (1.3)	19.5	3.5	3.0	39.8	1.9	ND (0.37)	ND (2.5)
IA-012 (C-Clothing Store)	Indoor Air	4/18/2019	44.2	ND (0.47)	6.8	2.1	ND (1.3)	ND (5.2)	ND (1.0)	1.5	31.5	1.6	ND (0.38)	ND (2.6)
IA-Ground Floor-013	Indoor Air	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IA-Ambeint (On Dock)*	Indoor Air	4/4/2019	7.5	0.54	ND (1.2)	2.6	ND (1.3)	ND (5.2)	ND (1.0)	1.9	ND (1.0)	ND (0.80)	ND (0.38)	ND (2.6)
	Indoor Air	4/18/2019	8.3	ND (0.50)	ND (1.2)	2.2	ND (1.4)	ND (5.5)	ND (1.1)	ND (1.2)	ND (1.1)	ND (0.85)	ND (0.40)	ND (2.7)
	Indoor Air	7/24/2019	11.2	ND (0.50)	ND (1.2)	3.0	ND (1.4)	ND (5.5)	ND (1.1)	1.2	1.1	ND (0.85)	ND (0.40)	ND (2.7)

¹ Non-Residential Indoor Air Statewide Health Standard Vapor Intrusion Screening Values

NS = No Standard Listed

ND = Not detected at or above the laboratory reporting limit; the reporting limit is given in parentheses. All reporting limits are below MSCs

Bold/Shaded = Exceedance of Applicable MSC(s)/Screening Value(s)

All results/Screening Values expressed in micrograms per cubic meter (ug/m³)

* The sample identification provided on the Chain of Custody describing the IA-Ambient (On Dock) location for the sample collected on July 24, 2019 was IA-009 (On the Dock). This is the same location that was utilized for the ambient air location during all sampling events.

Figure 3 - Soil Gas Sampling Location Plan

Plaza 2331
2331 East Market Street
Springettsbury Township, York County, Pennsylvania

Legend



Google Earth

© 2018 Google

N

100 ft

Table 2
Summary of Soil Gas Analytical Data
 Plaza 2331 Site
 2331 East Market Street
 Springettsbury Township, York County, Pennsylvania

EPS ENVIRONMENTAL PRODUCTS & SERVICES OF VERMONT, INC.		Target Compounds	Acetone	Benzene	2-Butanone (MEK)	Carbon Disulfide	cis 1,2-Dichloroethylene	trans 1,2-Dichloroethylene	Dichlorodifluoromethane	Ethylbenzene	Methylene Chloride	n-Hexane	1,1,1-Trichloroethane	Toluene	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes (total)	Helium
			140,000,000	16,000	22,000,000	3,100,000	NS	260,000	440,000	49,000	2,600,000	NS	22,000,000	22,000,000	180,000	8,800	31,000	31,000	14,000	440,000	NS
		Residential Near-Source Soil Gas ²	6,500,000	620	1,000,000	150,000	NS	13,000	21,000	1,900	130,000	NS	1,000,000	1,000,000	8,300	420	1,500	1,500	160	21,000	NS
Sample Identification	Media	Date Collected																			
EPS-SG-101	Soil Gas	6/18/2019	ND (<2,240)	ND (<303)	ND (<2,790)	ND (<589)	82,700	1,850	ND (<941)	ND (<822)	ND (<3290)	ND (<667)	ND (<1,030)	ND (<713)	29,000	7,280	ND (<930)	ND (<930)	4,680	ND (<1,650)	ND (<3.6)
EPS-SG-102	Soil Gas	6/18/2019	346	2.3	ND (<15.5)	6.5	29.6	ND (<4.2)	13.4	12.0	915	50.7	ND (<5.7)	122	486	15.1	8.2	ND (<5.2)	ND (<1.3)	21.0	ND (<3.6)
EPS-SG-103	Soil Gas	6/18/2019	38.6	ND (<0.63)	11.2	8.6	10.5	ND (<1.6)	ND (<2.0)	2.1	64.9	4.0	ND (<2.2)	4.8	5,180	44.4	5.8	ND (<1.9)	ND (<0.50)	8.8	ND (<3.6)
EPS-SG-104	Soil Gas	6/18/2019	ND (<1,190)	ND (161)	ND (<1,480)	ND (<313)	ND (398)	ND (<499)	ND (<437)	ND (1,750)	ND (<354)	ND (<549)	ND (<379)	102,000	322	ND (<494)	ND (<494)	ND (<129)	ND (<875)	ND (<3.6)	
EPS-SG-105	Soil Gas	6/18/2019	80.5	ND (<2.2)	ND (20.4)	8.0	ND (<5.5)	ND (<5.5)	ND (<6.9)	ND (<6.0)	309	30.9	ND (<7.5)	7.4	609	31.1	ND (<6.8)	ND (1.8)	ND (<12.0)	ND (<3.6)	
EPS-SG-106	Soil Gas	6/18/2019	ND (<56,000)	ND (<7,550)	ND (<69,700)	ND (<14,700)	848,000	22,300	ND (<23,500)	ND (<20,500)	ND (<82,000)	ND (16,600)	ND (<25,800)	ND (<17,800)	1,570,000	332,000	ND (<23,200)	ND (<23,200)	ND (41,100)	ND (<41,100)	ND (<3.6)

¹ Non-Residential Near-Source Statewide Health Standard Vapor Intrusion Screening Values

² Residential Near-Source Statewide Health Standard Vapor Intrusion Screening Values

NS = No Standard Listed

ND = Not detected at or above the laboratory reporting limit; the reporting limit is given in parentheses. All reporting limits are below MSCs

Bold = Exceedance of Residential Near Source SHS Screening Value(s)

Bold/Shaded = Exceedance of Residential and Non-Residential Near Source SHS Screening Value(s)

All results/Screening Values expressed in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

A	B	C	D	E	F	G	H	I	J	K	L
---	---	---	---	---	---	---	---	---	---	---	---

Mann-Kendall Trend Test Analysis - PCE In Sub-Slab Vapor at VP-3

User Selected Options

Date/Time of Computation ProUCL 5.19/24/2019 10:53:59 AM

From File WorkSheet.xls

Full Precision OFF

Confidence Coefficient 0.95

Level of Significance 0.05

PCE at VP-3

General Statistics

Number or Reported Events Not Used 0

Number of Generated Events 14

Number Values Reported (n) 14

Minimum 445

Maximum 110000

Mean 30592

Geometric Mean 4216

Median 1031

Standard Deviation 44216

Coefficient of Variation 1.445

Mann-Kendall Test

M-K Test Value (S) -37

Tabulated p-value 0.024

Standard Deviation of S 18.27

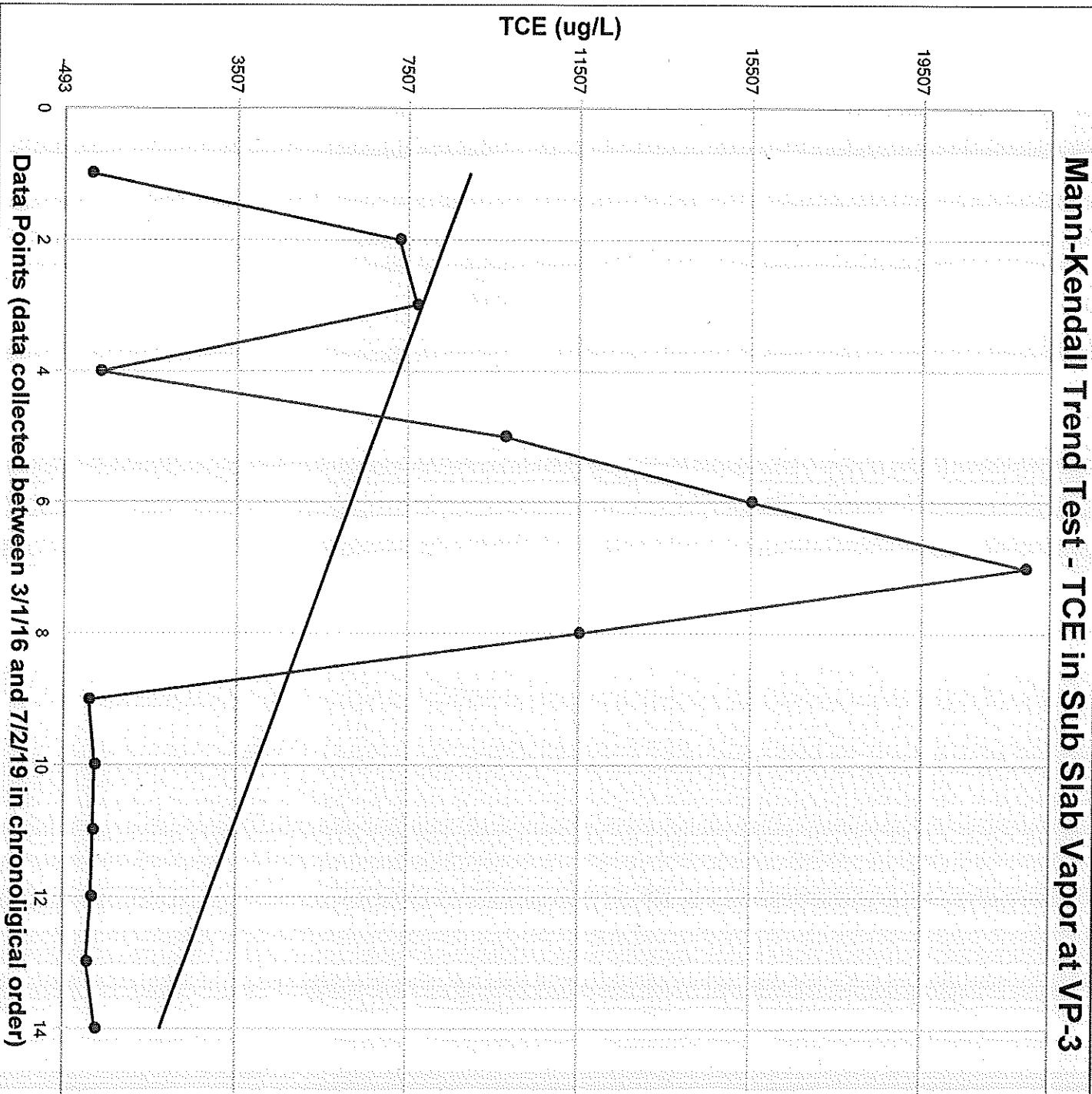
Standardized Value of S -1.971

Approximate p-value 0.0244

Statistically significant evidence of a decreasing

trend at the specified level of significance.

Mann-Kendall Trend Test - TCE in Sub Slab Vapor at VP-3



Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.2665
Standardized Value of S	-0.9854
M-K Test Value (S)	-19
Tabulated p-value	0.1650
Approximate p-value	0.1622
OLS Regression Line (Blue)	
OLS Regression Slope	-551.8031
OLS Regression Intercept	9,499.4659
Insufficient statistical evidence of a significant trend at the specified level of significance.	

Attachment D

Data Summary Tables

Table 2
Summary of Soil Analytical Data
 Plaza 2331 Site
 2331 East Market Street
 Springettsbury Township, York County, Pennsylvania

Target Compounds			Trichloroethylene (TCE)	Tetrachloroethylene (PCE)	cis 1,2-Dichloroethylene	trans 1,2-Dichloroethylene	1,1-Dichloroethylene	Vinyl Chloride
Non-Residential Soil-to-Groundwater MSC ¹			0.5	0.5	7	10	0.7	0.2
Non-Residential Direct Contact 0-2 Feet MSC ²			160	3,200	6,400	4,800	10,000	61
Non-Residential Direct Contact 2-15 Feet MSC ³			180	3,600	10,000	5,500	10,000	280
Sample Identification	Depth (ft. bgs)	Date Collected						
SB-5	8.0	8/9/2011	ND (0.0032)	0.0033	ND (0.0032)	ND (0.0032)	ND (0.0032)	ND (0.0032)
SB-6	6.5	8/9/2011	ND (0.0052)	ND (0.0052)	ND (0.0052)	ND (0.0052)	ND (0.0052)	ND (0.0052)
SB-7	4.5	8/9/2011	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)
SB-8	4.5	8/9/2011	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)
SB-11	5.1	8/9/2011	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)
SB-12	12.0	8/9/2011	0.170	NA	0.360	ND (0.0051)	ND (0.0051)	ND (0.0051)
SB-13	7.0	8/9/2011	0.0048	0.026	0.270	ND (0.0040)	ND (0.0040)	ND (0.0040)
SB-13	13.0	8/9/2011	0.022	0.220	0.088	ND (0.0041)	ND (0.0041)	ND (0.0041)
SB-14	9.5	8/9/2011	ND (0.0058)	ND (0.0058)	ND (0.0058)	ND (0.0058)	ND (0.0058)	ND (0.0058)
SB-15	6.7	8/9/2011	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)
SB-17	3.0		0.0282	1.49	0.0863	0.000497	ND (0.000406)	ND (0.000390)
SB-18	4.0		0.00298	0.00472	0.0642	0.0041	ND (0.000363)	0.00123
SB-19	2.0		0.00457	0.0417	0.00144	ND (0.000317)	ND (0.000364)	ND (0.000369)
SB-20	2.0		0.822	30.2	0.999	0.00973	0.000591	0.00234
SB-21	3.0		ND (0.172)	0.955	3.58	ND (0.163)	0.123	ND (0.179)
SB-121	3.0	6/28/2017	7.4	2,680	3.7	ND (0.27)	ND (0.27)	ND (0.27)
SB-221A	3.0	9/11/2017	0.15	0.073	83.9	2.8	0.17	10.7
SB-221B	3.0	9/11/2017	ND (2.3)	44,200	ND (2.3)	ND (2.3)	ND (2.3)	ND (2.3)
SB-221A	5.0	9/11/2017	0.14	ND (0.23)	14.5	0.33	0.0074	6.0
SB-221A	7.0	9/11/2017	0.79	2.5	11.3	0.14	ND (0.0045)	0.31
SB-21	10.0		1.3	6.03	10.5	0.0799	0.0361	ND (0.0693)
SB-121	10.0	6/28/2017	1.6	6.4	7.4	0.056	ND (0.0056)	0.043
SB-221A	10.0	9/11/2017	1.1	13.1	10.6	0.13	ND (0.0045)	0.16
SB-22	5.0		ND (0.0746)	0.0763	2.61	0.132	0.00139	2.98
SB-122	5.0	6/28/2017	0.62	17.6	57.0	0.68	ND (0.29)	0.88
SB-222A	5.0	9/11/2017	14.7	135	17.9	0.15	ND (0.0046)	0.66
SB-22	10.0		0.561	2.95	3.29	0.0261	0.000695	ND (0.0749)
SB-122	10.0	6/28/2017	0.81	5.6	5.0	0.068	ND (0.0054)	ND (0.0054)
SB-23	7.0		0.621	4.32	1.55	0.00872	ND (0.000384)	ND (0.0299)
SB-123	7.0	6/28/2017	0.15	2.6	5.5	0.015	ND (0.0050)	0.028
SB-223A	3.0	9/11/2017	0.032	0.14	32.5	0.25	0.018	6.0
SB-223A	5.0	9/11/2017	ND (0.0048)	0.045	0.12	0.017	ND (0.0048)	1.7
SB-223A	7.0	9/11/2017	0.27	1.4	2.0	0.017	ND (0.0045)	0.26
SB-24	3.0		0.0868	0.308	0.00937	0.000958	ND (0.000384)	ND (0.00728)
SB-24	8.0		0.121	1.08	0.395	0.0029	ND (0.000386)	ND (0.000371)
SB-124	8.0	6/28/2017	2.9	21.0	2.3	0.019	ND (0.0050)	0.077
SB-25	5.0		0.00786	0.00605	0.066	0.000374	ND (0.00037)	ND (0.000355)
SB-26	3.0		0.002	0.00373	17.9	0.12	0.00572	0.598
SB-126	3.0	6/28/2017	ND (0.0049)	ND (0.0049)	0.053	ND (0.0049)	ND (0.0049)	ND (0.0049)
SB-27	3.0		0.0027	0.00813	0.155	0.0303	0.00123	0.0362
SB-27	9.0		0.0939	0.729	0.375	0.0044	ND (0.00037)	ND (0.00719)
SB-127	9.0	6/28/2017	0.026	0.071	0.072	ND (0.0060)	ND (0.0060)	ND (0.0060)
SB-28	5.0		0.0409	0.905	0.299	0.0139	0.000511	0.00644
SB-29	3.0		0.00787	0.031	0.0128	ND (0.00033)	ND (0.000379)	ND (0.000364)
SB-30	3.0		0.00155	0.00169	0.0366	0.00301	ND (0.000366)	0.00153
SB-31	3.0		0.00122	0.000964	0.122	0.0128	ND (0.000367)	0.0179
SB-33	3.0		0.00158	0.00342	0.00797	0.000741	ND (0.000378)	0.0445
SB-33	8.0		0.137	1.24	0.879	0.0029	0.000655	0.0028
SB-133	8.0	6/28/2017	0.030	0.12	0.062	ND (0.0054)	ND (0.0054)	0.015
SB-34	3.0		0.00616	0.00259	0.00252	0.0021	ND (0.000375)	0.0352
SB-34	8.0		0.104	0.544	0.174	0.000668	ND (0.00037)	ND (0.000355)
SB-134	8.0	6/28/2017	0.026	0.11	0.14	ND (0.0050)	ND (0.0050)	ND (0.0050)
SB-35	3.0		0.00685	0.00273	0.00664	0.0025	ND (0.00038)	0.0381
SB-35	8.0		0.0356	0.291	0.0763	0.000494	ND (0.00039)	ND (0.000375)
SB-36	2.0		ND (0.00037)	0.00398	ND (0.000284)	ND (0.000319)	ND (0.000367)	ND (0.000352)
EPS-336	5.0	11/22/2017	8.8	27.8	30.7	0.32	0.057	2.6
EPS-336	9.5	11/22/2017	2.2	19.8	6.3	0.068	0.0064	0.29
EPS-336	15.0	11/22/2017	0.57	7.5	0.97	0.012	ND (0.0040)	0.015
EPS-337	5.0	11/22/2017	279	12,100	42.8	ND (2.4)	ND (2.4)	ND (2.4)
EPS-337	10.0	11/22/2017	7.4	200	8.5	0.055	0.0045	0.32
EPS-338	5.0	11/22/2017	1.2	7.8	1.2	0.013	ND (0.0039)	ND (0.0039)

Notes:

¹ Non-Residential Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil; Soil to Groundwater Numeric Values in Used Aquifers, Total Dissolved Solids (TDS)<2500

² Non-Residential MSCs for Organic Regulated Substances in Soil; Direct Contact 0-2 Feet Numeric Values in Used Aquifers, Total Dissolved Solids (TDS)<2500

³ Non-Residential MSCs for Organic Regulated Substances in Soil; Direct Contact 2-15 Feet Numeric Values in Used Aquifers, Total Dissolved Solids (TDS)<2500

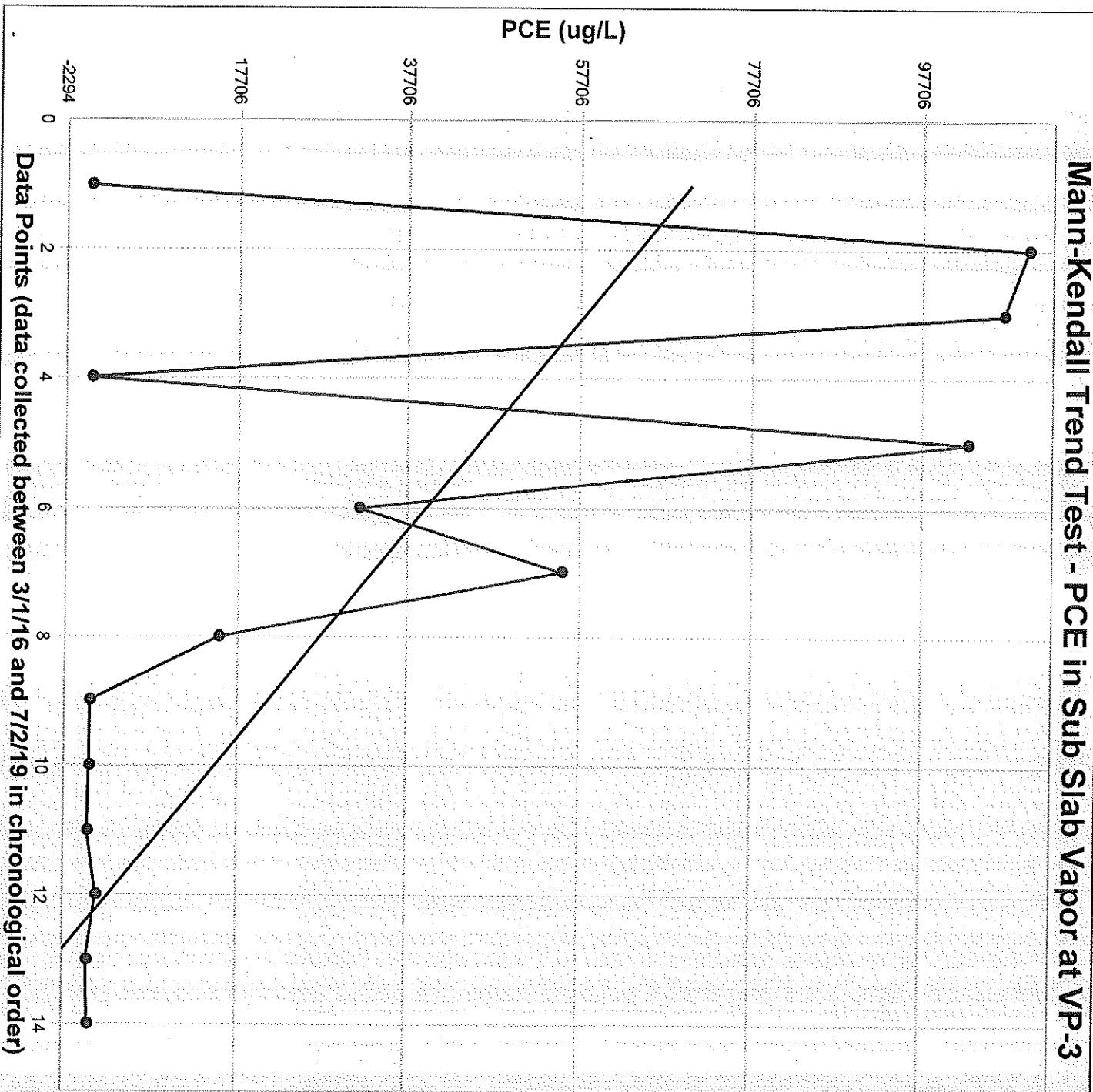
ND = Not detected at or above the laboratory reporting limit (reporting limit indicated in parentheses).

NA = Not analyzed.

Cells that are Bold/Shaded contain results that exceed applicable MSC(s).

Units are in milligrams per kilogram (mg/kg).

Mann-Kendall Trend Test - PCE in Sub Slab Vapor at VP-3



Mann-Kendall Trend Analysis

n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.2665
Standardized Value of S	-1.9708
M-K Test Value (S)	-37
Tabulated p-value	0.0240
Approximate p-value	0.0244
OLS Regression Line (Blue)	
OLS Regression Slope	-6.1564220
OLS Regression Intercept	76.7648791

Statistically significant evidence
of a decreasing trend at the
specified level of significance.

Table 3
Summary of Soil Gas Air Analytical Data
Plaza 2331 Site
2331 East Market Street
Springettsbury Township, York County, Pennsylvania

Target Compounds			Acetone	Benzene	2-Butanone (MEK)	Carbon Disulfide	cis,1,2-Dichloroethylene	trans,1,2-Dichloroethylene	1,1-Dichloroethylene	Dichlorodifluoromethane	Ethybenzene	4-Ethyltoluene	Hexane	Isooctane	Methylene Chloride	Toluene	Xylenes (total)							
Residential Near-Source Soil Gas ¹	6,500,000	620	1,000,000	150,000	NS	13,000	42,000	21,000	1,900	NS	150,000	NS	2,700	NS	1,000,000	1,000,000	8,300	420	1,500	1,500	160	21,000		
Non-Residential Near-Source Soil Gas ²	140,000,000	16,000	22,000,000	3,100,000	NS	260,000	880,000	440,000	49,000	NS	3,100,000	NS	68,000	NS	22,000,000	22,000,000	180,000	8,800	31,000	31,000	14,000	440,000		
Non-Residential Sub-Slab Soil Gas ³	17,000,000	2,000	2,800,000	390,000	34,000	34,000	110,000	56,000	6,300	NS	390,000	NS	8,700	NS	2,800,000	2,800,000	22,000	1,100	3,900	3,900	1,700	56,000		
Non-Residential Indoor Air ⁴	140,000	16	13,000	3,100	260	260	880	440	49	NS	3,100	NS	68	NS	22,000	22,000	180	8.8	31	31	14	440		
Sample Identification	Media	Date Collected																						
Soil Gas 221	Soil Gas	12/6/2018	14.2	1.4	ND (5.1)	3.1	48.2	ND (1.4)	ND (1.4)	2.1	ND (1.5)	ND (4.3)	NA	NA	23.9	4.7	ND (1.9)	4.0	1,440	24.1	2.5	ND (1.7)	ND (0.44)	3.7
Soil Gas ARM-7	Soil Gas	12/6/2018	26.5	2.6	9.2	2.6	ND (1.5)	ND (1.5)	ND (1.5)	1.9	ND (1.6)	ND (4.6)	NA	NA	28.0	11.7	ND (2.0)	6.3	36.1	ND (1.0)	2.6	ND (1.8)	ND (0.48)	4.6
VP-1	Soil Gas	1/29/2016	13	1.9	8.0	6.6	3.4	3.6	ND (0.8)	1.5	1.5	ND (1.0)	23	9.4	9.7	NA	1.5	30	22	28	1.2	ND (1.0)	ND (0.5)	8.0
	Soil Gas	3/4/2016	25	1.1	2.4	ND (1.6)	74.0	0.89	ND (0.79)	3.8	1.8	ND (0.98)	0.8	ND (0.93)	ND (0.69)	NA	ND (1.1)	1.6	310	29	ND (0.98)	ND (0.98)	ND (0.51)	7.2
VP-2	Soil Gas	1/29/2016	12	1.9	1.8	ND (0.6)	4.2	ND (0.8)	ND (0.8)	1.6	2.6	1.1	3.0	1.4	1.9	NA	ND (1.0)	16	16	5.9	4.4	ND (1.0)	ND (0.5)	17.2
	Soil Gas	3/4/2016	28	1.1	9.5	ND (1.6)	7.8	ND (0.79)	ND (0.79)	3.7	4.6	1.2	1.0	4.6	ND (0.69)	NA	ND (1.1)	4.4	5.3	1.6	2.0	1.0	ND (0.51)	21.1
VP-3	Sub-Slab	1/29/2016	14	7.8	1.9	ND (0.6)	510	2.7	ND (0.8)	1.5	11	2.1	5.4	4.5	3.4	NA	ND (1)	94	510	110	8.4	2.4	ND (0.5)	62
	Ambient Air	1/29/2016	6.6	0.64	ND (0.6)	ND (0.6)	2.8	ND (0.8)	ND (0.8)	1.6	ND (0.9)	ND (1)	0.83	ND (0.9)	1.8	NA	ND (1)	0.83	120	4.1	ND (1.0)	ND (1.0)	ND (0.5)	ND (2)
	Sub-Slab	3/4/2016	15	ND (6.4)	ND (15)	ND (16)	32,000	240	32	ND (9.9)	ND (8.7)	ND (9.8)	ND (7.0)	ND (9.3)	ND (6.9)	NA	ND (11)	ND (7.5)	110,000	7,300	ND (9.8)	ND (9.8)	44	ND (9.8)
	Ambient Air	3/4/2016	29	1.0	2.9	ND (1.6)	57	ND (0.79)	ND (0.79)	6.8	3.1	ND (0.98)	0.77	ND (0.93)	1.2	NA	ND (1.1)	1.7	260	23	ND (0.98)	ND (0.98)	ND (0.51)	12.2
	Sub-Slab	2/21/2018	77.1	4.5	ND (5.0)	ND (1.1)	23,300	175	12.4	ND (1.7)	ND (1.5)	2.1	NA	2.3	205	14.6	2.3	6.9	107,000	7,710	2.8	ND (1.7)	143	6.3
	Sub-Slab	4/6/2018	ND (4.0)	0.85	5.6	ND (1.1)	1,990	16.5	ND (1.4)	2.2	ND (1.5)	8.3	NA	ND (1.9)	ND (5.9)	8.3	ND (1.9)	2.4	587	326	ND (1.7)	ND (1.7)	ND (0.44)	ND (3.0)
	Sub-Slab	5/17/2018	ND (135)	ND (18.2)	ND (168)	ND (35.5)	92,700	259	ND (45.2)	ND (56.7)	ND (49.5)	ND (56.0)	NA	NA	ND (198)	ND (40.2)	ND (62.3)	ND (43.0)	103,000	9,750	ND (56.0)	ND (56.0)	159	ND (7.8)
	Sub-Slab	6/21/2018	ND (4.3)	76.5	ND (5.4)	96.8	434,000	1,880	132,000	2.6	1.7	ND (1.8)	NA	NA	65.6	1,830	9.1	9.3	32,000	15,500	ND (1.8)	ND (1.8)	11,300	ND (4.8)
	Sub-Slab	7/25/2018	ND (4.4)	16.5	43.8	36.4	86,900	3,060	96.5	2.5	2.6	ND (1.8)	NA	NA	15.7	114	9.3	4.4	55,600	21,900	ND (4.6)	ND (1.8)	3,440	5.6
	Sub-Slab	8/28/2018	502	15.2	504	60.4	147,000	362	113.0	ND (3.2)	ND (2.8)	ND (7.9)	NA	NA	41.0	817	4.1	9.4	15,500	11,500	3.4	ND (3.2)	29,100	ND (2.8)
	Sub-Slab	5/22/2019	132	ND (4.5)	ND (41.7)	ND (8.8)	754	ND (11.2)	ND (11.2)	ND (14.0)	ND (12.3)	ND (34.8)	NA	NA	94.4	124	ND (15.4)	ND (10.6)	543	82.2	ND (13.9)	ND (13.9)	200	ND (24.6)
	Sub-Slab	5/22/2019	377	ND (46.8)	1,140	ND (91.2)	4,260	ND (116)	ND (116)	ND (145)	ND (127)	ND (360)	NA	NA	ND (508)	502	ND (160)	ND (110)	568	212	ND (144)	ND (144)	713	ND (255)
	Sub-Slab	5/23/2019	ND (352)	ND (47.4)	ND (438)	ND (92.4)	3,590	ND (118)	ND (118)	ND (147)	ND (129)	ND (365)	NA	NA	906	452	ND (162)	ND (112)	445	203	ND (146)	ND (146)	329	ND (258)
	Sub-Slab	7/1/2019	ND (4.3)	3.5	ND (5.4)	15.0	2,930	8.4	4.4	2.3	ND (1.6)	ND (4.5)	NA	NA	13.5	170	ND (2.0)	6.3	1,470	155	ND (1.8)	ND (1.8)	65.9	4.2
	Sub-Slab	7/1/2019	94.0	2.3	17.8	4.7	496	2.6	ND (1.6)	2.4	ND (1.7)	ND (4.8)	NA	NA	16.8	49.1	ND (2.2)	8.3	470	53	ND (1.9)	ND (1.9)	30.3	5.1
	Sub-Slab	7/2/2019	793	7.9	191	20.5	6,310	18.1	ND (7.3)	ND (9.1)	ND (7.9)	ND (22.5)	NA	NA	ND (31.8)	623	ND (10)	ND (6.9)	591	252	ND (9.0)	ND (9.0)	198	ND (15.9)
	Sub-Slab	2/21/2018	ND (4.3)	2.5	18.4	5.9	350	4.3	ND (1.4)	ND (1.8)	ND (1.6)	ND (1.8)	NA	ND (2.0)	11.4	71.5	ND (2.0)	5.0	876	107	2.5	ND (1.8)	ND (0.46)	5.0
	Sub-Slab	5/17/2018	35.7	2.6	ND (8.8)	ND (1.8)	239	ND (2.4)	ND (2.4)	ND (2.9)	ND (2.6)	ND (2.9)	NA	NA	18.4	55.4	ND (3.2)	3.9	412	84.6	ND (2.9)	ND (0.76)	ND (7.8)	
	Sub-Slab	8/28/2018	352	7.9	38.8	14.6	345	6.5	ND (4.6)	ND (5.8)	ND (5.0)	ND (14.2)	NA	NA	325	63.7	ND (6.3)	16.5	585	833	6.6	ND (5.7)	61.3	ND (5.0)

Notes:

¹ Residential Near Source Soil Gas Statewide Health Standard Vapor Intrusion Screening Values

² Non-Residential Near-Source Health Standard Vapor Intrusion Screening Values

^{3</sup}

Table 3
Summary of Soil Gas Analytical Data
 Plaza 2331 Site
 2331 East Market Street
 Springettsbury Township, York County, Pennsylvania

Target Compounds			Acetone	Benzene	2-Butanone (MEK)	Carbon Disulfide	Cis 1,2-Dichloroethylene	trans 1,2-Dichloroethylene	Dichlorodifluoro-methane	Ethybenzene	Methylene Chloride	n-Hexane	Toluene	Trichloroethylene (TCE)	Tetrachloroethylene (PCE)	Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes (total)	Helium	
Non-Residential Near-Source Soil Gas¹			140,000,000	16,000	22,000,000	3,100,000	NS	260,000	440,000	49,000	2,600,000	3,100,000	22,000,000	22,000,000	180,000	8,800	31,000	31,000	14,000	440,000	NS
Residential Near-Source Soil Gas²			6,500,000	620	1,000,000	150,000	NS	13,000	21,000	1,900	130,000	150,000	1,000,000	1,000,000	8,300	420	1,500	1,500	160	21,000	NS
Sample Identification	Media	Date Collected																			
EPS-SG-101	Soil Gas	6/18/2019	ND (2,240)	ND (303)	ND (2,790)	ND (589)	82,700	1,850	ND (941)	ND (822)	ND (3290)	ND (667)	ND (1,030)	ND (713)	29,000	7,280	ND (930)	ND (930)	4,680	ND (1,650)	ND (3.6)
	Soil Gas	12/12/2019	31.5	1.3	21.8	25.0	2,160	43.8	2.6	ND (1.5)	20.0	36.1	ND (1.9)	9.1	2,870	666	ND (1.7)	ND (1.7)	676	4.6	NA
	Soil Gas	12/26/2019	71.0	1.9	7.4	29.1	4,490	114	ND (1.8)	ND (1.5)	11.2	71.4	ND (1.9)	6.3	3,700	911	ND (1.7)	ND (1.7)	1,200	ND (3.1)	NA
	Soil Gas	1/30/2020	ND (135)	ND (18.2)	ND (168)	ND (35.5)	4,500	122	ND (56.7)	ND (49.5)	ND (198)	110	ND (62.3)	ND (43.0)	2,340	680	ND (56.0)	ND (56.0)	1,620	ND (99.3)	NA
EPS-SG-102	Soil Gas	6/18/2019	346	2.3	ND (15.5)	6.5	29.6	ND (4.2)	13.4	12.0	915	50.7	ND (5.7)	122	486	15.1	8.2	ND (5.2)	ND (1.3)	21.0	ND (3.6)
	Soil Gas	6/18/2019	38.6	ND (0.63)	11.2	8.6	10.5	ND (1.6)	ND (2.0)	2.1	64.9	4.0	ND (2.2)	4.8	5,180	44.4	5.8	ND (1.9)	ND (0.50)	8.8	ND (3.6)
EPS-SG-104	Soil Gas	6/18/2019	ND (1,190)	ND (161)	ND (1,480)	ND (313)	ND (398)	ND (499)	ND (437)	ND (1,750)	ND (354)	ND (549)	ND (379)	102,000	322	ND (494)	ND (494)	ND (129)	ND (875)	ND (3.6)	
EPS-SG-105	Soil Gas	6/18/2019	80.5	ND (2.2)	ND (20.4)	8.0	ND (5.5)	ND (5.5)	ND (6.9)	ND (6.0)	309	30.9	ND (7.5)	7.4	609	31.1	ND (6.8)	ND (1.8)	ND (12.0)	ND (3.6)	
	Soil Gas	6/18/2019	ND (56,000)	ND (7,550)	ND (69,700)	ND (14,700)	848,000	22,300	ND (23,500)	ND (20,500)	ND (82,000)	ND (16,600)	ND (25,800)	ND (17,800)	1,570,000	332,000	ND (23,200)	ND (23,200)	681,000	ND (41,100)	ND (3.6)
	Soil Gas	12/12/2019	ND (11,500)	ND (1,560)	ND (14,400)	ND (3,030)	166,000	5,940	ND (4,830)	ND (4,230)	ND (16,900)	5,570	ND (5,310)	ND (3,670)	80,400	636,000	ND (4,780)	ND (4,780)	122,000	ND (8,470)	NA
	Soil Gas	12/26/2019	ND (4.3)	15.6	ND (5.4)	116	302,000	2,410	ND (1.8)	3.1	16.8	3,120	ND (2.0)	11.7	30,700	70,400	2.7	ND (1.7)	66,300	15.0	NA
EPS-SG-106	Soil Gas	1/30/2020	ND (130)	ND (17.6)	ND (162)	108	248,000	749	ND (54.5)	ND (47.7)	ND (191)	4,260	ND (59.9)	ND (41.4)	10,700	3,160	ND (53.9)	ND (53.9)	222,000	ND (95.6)	NA

Notes:

¹ Non-Residential Near-Source Health Standard Vapor Intrusion Screening Values

² Residential Near-Source Health Standard Vapor Intrusion Screening Values

NS = No Standard Listed

ND = Not detected at or above the laboratory reporting limit (reporting limit indicated in parentheses).

NA = Not analyzed.

Bold = Exceedance of Residential Near Source SHS Screening Value(s)

Bold/Shaded = Exceedance of Residential and Non-Residential Near Source SHS Screening Value(s)

Units are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Table 4
Summary of Baseline IAQ Analytical Data
Plaza 2331 Site
2331 East Market Street
Springettsbury Township, York County, Pennsylvania

Target Compounds			Acetone	Benzene	Dichlorodifluoro methane	Ethylbenzene	Methylene Chloride	n-Hexane	Toluene	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	Vinyl Chloride	Xylenes (total)
										140,000	16	260	440
Sample Identification	Media	Date Collected											
IA-001 (Pump Room)	Indoor Air	4/4/2019	10.3	0.80	38.9	2.1	ND (1.2)	ND (4.9)	ND (1.0)	2.3	188	9.3	0.64 ND (2.5)
	Indoor Air	4/18/2019	20.9	ND (0.46)	57.6	2.5	ND (1.2)	7.4	1.2	1.3	273	11.2	ND (0.37) 1.3
	Indoor Air	7/24/2019	55.2	0.55	86.5	3.0	ND (1.3)	ND (5.3)	ND (1.1)	3.3	700	26.8	ND (0.39) ND (2.6)
IA-001 (Pump Room)	Indoor Air	9/4/2019	249	0.58	81.0	2.4	ND (1.4)	ND (5.7)	ND (1.2)	4.3	847	19.0	ND (0.42) ND (2.8)
IA-001 (Before-VR)**	Indoor Air	9/23/2019	69.8	0.64	55.6	2.4	ND (1.3)	ND (5.1)	ND (1.0)	3.7	1,240	14.8	ND (0.37) ND (2.5)
IA-001 (After-VR)**	Indoor Air	9/24/2019	52.8	ND (0.50)	49.1	2.6	ND (1.4)	ND (5.5)	ND (1.1)	2.8	1,050	12.9	ND (0.40) ND (2.7)
IA-001 (24 Hrs. After)**	Indoor Air	9/25/2019	45.2	0.50	44.4	2.4	ND (1.4)	10.9	1.6	4.3	939	12.5	ND (0.40) ND (2.7)
IA-001 ((Pump	Indoor Air	11/13/2019	13.7	ND (0.48)	15.1	2.2	ND (1.3)	10.5	1.1	ND (1.1)	257	5.2	ND (0.39) ND (2.6)
IA-001 (2) Pump Room	Indoor Air	11/14/2019	19.9	0.51	20.6	2.3	ND (1.3)	13.5	1.7	1.1	360	6.9	ND (0.37) ND (2.5)
IA-001 (3) Pump Room 5	Indoor Air	11/18/2019	21.5	ND (0.48)	15.3	2.1	ND (1.3)	6.2	ND (1.1)	ND (1.1)	232	3.6	ND (0.39) ND (2.6)
IA-001	Indoor Air	12/12/2019	17.9	0.63	10.3	2.1	ND (1.4)	6.5	ND (1.1)	1.9	180	2.5	ND (0.40) 4.1
IA-001	Indoor Air	12/19/2019	16.4	1.0	8.2	2.0	ND (1.6)	17.4	2.6	5.5	123	10.0	ND (0.48) 4.8
IA-001	Indoor Air	12/26/2019	23.6	1.4	7.9	2.9	ND (1.4)	ND (5.5)	1.2	2.1	102	1.8	ND (0.40) 4.1
IA-001	Indoor Air	1/17/2020	12.0	ND (0.50)	5.5	2.3	ND (1.4)	ND (5.5)	ND (1.1)	ND (1.2)	66.7	1.2	ND (0.40) ND (2.7)
IA-001	Indoor Air	1/30/2020	25.9	0.80	7.1	2.6	ND (1.5)	ND (5.9)	ND (1.2)	ND (1.3)	99.5	2.1	ND (0.44) ND (3.0)
IA-002 (G Middle Room)	Indoor Air	4/4/2019	10.2	0.74	38.0	2.2	ND (1.2)	ND (5.0)	ND (1.0)	1.8	190	9.0	ND (0.37) ND (2.5)
	Indoor Air	7/24/2019	56.0	0.49	79.3	2.8	4.1	ND (5.3)	1.1	2.7	603	23.4	ND (0.39) 26.1
	Indoor Air	9/4/2019	24.0	0.59	82.7	2.5	ND (1.3)	ND (5.1)	ND (1.0)	3.9	858	19.5	ND (0.37) ND (2.5)
IA-003 (Below Dock)	Indoor Air	1/20/2020	8.5	ND (0.51)	5.8	1.9	ND (1.4)	ND (5.6)	ND (1.1)	ND (1.2)	86	1.6	ND (0.41) ND (2.8)
	Indoor Air	4/4/2019	12.6	0.70	40.8	2.3	ND (1.2)	ND (5.0)	ND (1.0)	2.4	188	9.0	0.70 ND (2.5)
	Indoor Air	7/24/2019	50.0	0.55	92.8	2.9	ND (1.3)	8.0	1.1	2.6	739	27.9	ND (0.39) ND (2.6)
IA-004 (Suite H2)	Indoor Air	9/4/2019	207	0.56	85.2	2.4	1.6	ND (5.1)	ND (1.0)	3.6	909	19.6	ND (0.37) ND (2.5)
	Indoor Air	4/4/2019	12.6	0.72	34.6	2.2	ND (1.3)	ND (5.1)	ND (1.0)	3.4	160	7.8	0.55 2.0
	Indoor Air	7/24/2019	105	0.58	74.6	2.7	ND (1.3)	6.8	1.3	3.2	607	22.6	ND (0.37) ND (2.5)
IA-004 (H2 Doll FRU)	Indoor Air	1/20/2020	25.6	0.52	6.9	2.5	ND (1.4)	ND (5.5)	ND (1.1)	ND (1.2)	101	2.3	ND (0.40) ND (2.7)
IA-005 (R.R.)	Indoor Air	4/4/2019	14.9	0.81	31.5	2.4	ND (1.2)	ND (4.7)	1.2	8.9	146	7.2	0.41 2.1
	Indoor Air	7/24/2019	64.5	0.64	61.0	2.5	ND (1.4)	ND (5.5)	ND (1.1)	2.5	818	18.9	ND (0.40) ND (2.7)
IA-006 (Vault)	Indoor Air	4/4/2019	20.6	0.79	23.3	2.2	ND (1.6)	12.1	2.7	12.8	117	5.7	ND (0.48) 2.1
	Indoor Air	7/24/2019	56.9	0.70	60.9	2.9	ND (1.3)	5.7	ND (1.0)	3.4	439	19.1	ND (0.37) ND (2.5)
IA-007 (H3-YOGA)	Indoor Air	4/4/2019	16.7	0.88	38.6	2.5	ND (1.3)	ND (5.2)	ND (1.0)	2.6	183	8.3	0.59 3.3
	Indoor Air	7/24/2019	77.6	0.68	75.2	3.1	ND (1.3)	ND (5.1)	ND (1.0)	3.7	545	22.7	ND (0.37) ND (2.5)
IA-008 (WIS)	Indoor Air	1/17/2019	26.1	ND (0.52)	5.5	2.1	ND (1.4)	ND (5.7)	ND (1.2)	ND (1.2)	62.4	1.0	ND (0.42) ND (2.8)
	Indoor Air	4/4/2019	16.2	0.87	38.8	2.4	ND (1.3)	ND (5.1)	ND (1.0)	3.1	196	8.3	ND (0.37) 5.3
	Indoor Air	7/24/2019	73.7	0.85	76.7	3.1	ND (1.8)	ND (7.1)	ND (1.4)	3.8	524	22.8	ND (0.2) ND (3.6)
IA-009 (F-Warehouse)	Indoor Air	1/17/2020	28.5	ND (0.50)	5.7	2.3	ND (1.4)	ND (5.5)	ND (1.1)	ND (1.2)	62.8	1.1	ND (0.40) ND (2.7)
IA-009 (Ambient)	Indoor Air	4/18/2019	32.0	ND (0.73)	14.1	2.4	ND (2.0)	ND (7.9)	ND (1.6)	ND (1.7)	75.2	2.8	ND (0.58) ND (4.0)
IA-010 (D-Jeweler Sho)	Indoor Air	4/18/2019	133	0.50	1.4	2.2	ND (1.3)	ND (5.2)	ND (1.0)	2.4	7.7	ND (0.80)	ND (0.38) ND (2.6)
IA-010 (J.S.)	Indoor Air	1/20/2020	71.5	ND (0.55)	1.8	2.4	ND (1.5)	MD (5.9)	ND (1.2)	ND (1.3)	29.3	ND (0.92)	ND (0.44) ND (3.0)
IA-011 (Rest Room-B)	Indoor Air	4/18/2019	42.8	0.54	7.0	2.3	ND (1.3)	19.5	3.5	3.0	39.8	1.9	ND (0.37) ND (2.5)
IA-011 (Retail Store)	Indoor Air	1/20/2020	14.0	ND (0.55)	3.1	2.3	ND (1.5)	ND (5.9)	ND (1.2)	ND (1.3)	48.1	1.3	ND (0.44) ND (3.0)
IA-012 (C-Clothing Store)	Indoor Air	4/18/2019	44.2	ND (0.47)	6.8	2.1	ND (1.3)	ND (5.2)	ND (1.0)	1.5	31.5	1.6	ND (0.38) ND (2.6)
IA-Ground Floor-013	Indoor Air	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IA-013 (A.R.S.)	Indoor Air	1/20/2020	25.4	ND (3.4)	ND (8.4)	ND (10.5)	ND (9.2)	73.3	ND (7.4)	ND (8.0)	14.6	ND (5.7)	ND (18.4)
IA-Ambeint (On Dock)*	Indoor Air	4/4/2019	7.5	0.54	ND (1.2)	2.6	ND (1.3)	ND (5.2)	ND (1.0)	1.9	ND (1.0)	ND (0.80)	ND (0.38) ND (2.6)
	Indoor Air	4/18/2019	8.3	ND (0.50)	ND (1.2)	2.2	ND (1.4)	ND (5.5)	ND (1.1)	ND (1.2)	ND (1.1)	ND (0.85)	ND (0.40) ND (2.7)
	Indoor Air	7/24/2019	11.2	ND (0.50)	ND (1.2)	3.0	ND (1.4)	ND (5.5)	ND (1.1)	1.2	1.1	ND (0.85)	ND (0.40) ND (2.7)

Notes:

¹ Non-Residential Indoor Air Statewide Health Standard Vapor Intrusion Screening Values

NS = Not Sampled.

ND = Not detected at or above the laboratory reporting limit; the reporting limit is given in parentheses. All reporting limits are below MSCs.

Bold/Shaded = Exceedance of Applicable MSC(s)/Screening Value(s)

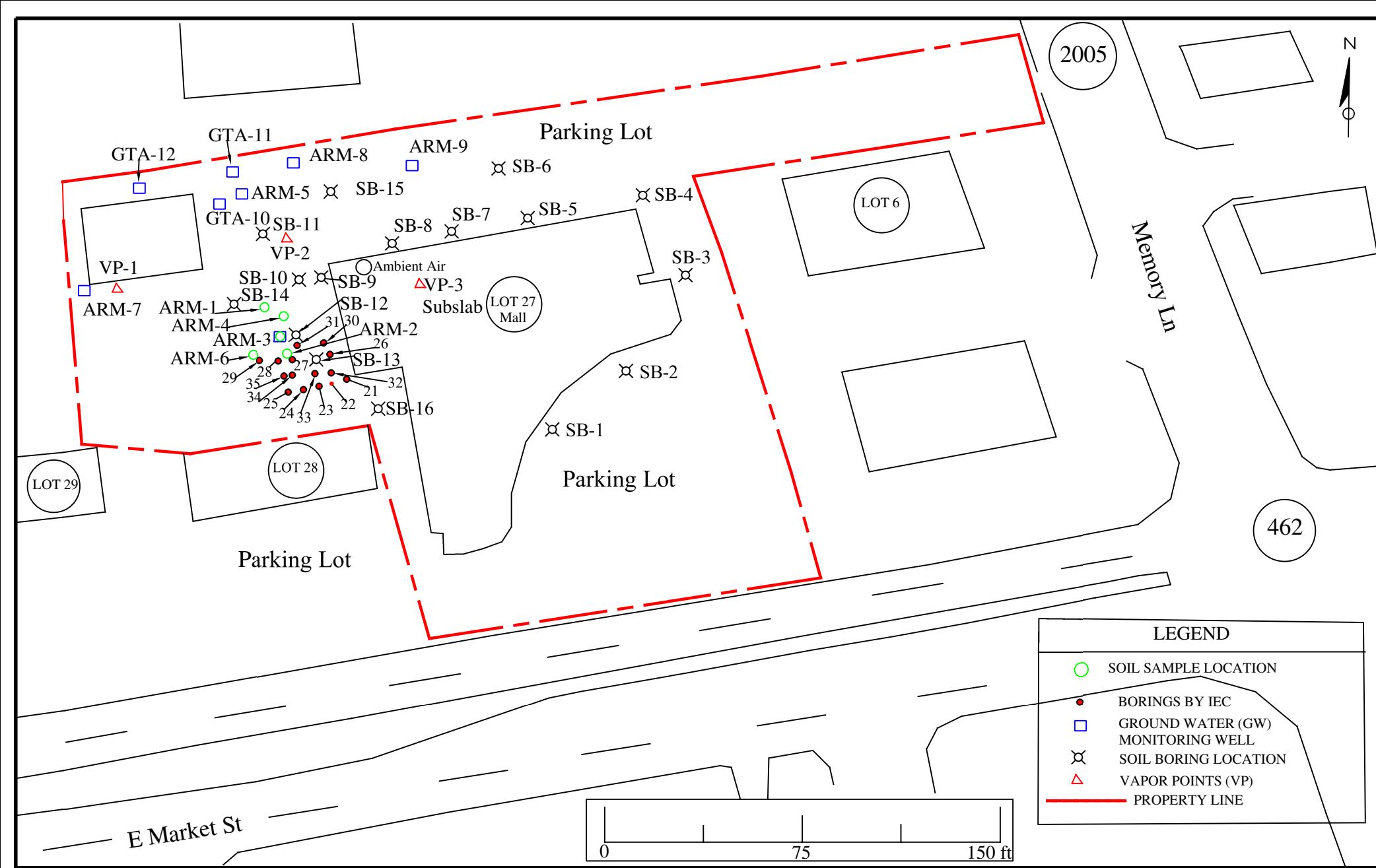
Units are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

* The sample identification provided on the Chain of Custody describing the IA-Ambeint (On Dock) location for the sample collected on July 24, 2019 was IA-009 (On the Dock). This is the same location that was utilized for the ambient air location during all sampling events.

** = Post-remediation sampling

Attachment E

Sample Location Mapping



SITE MAP
PLAZA 2331 COMMERCIAL PROPERTY
2331 EAST MARKET ST, LLC
YORK, PA 17402
39°58'28.37" N 76°40'52.84" W

EPSVT PROJECT NO.: G11788

DATE: MAY 2017

FIGURE NO.: 1

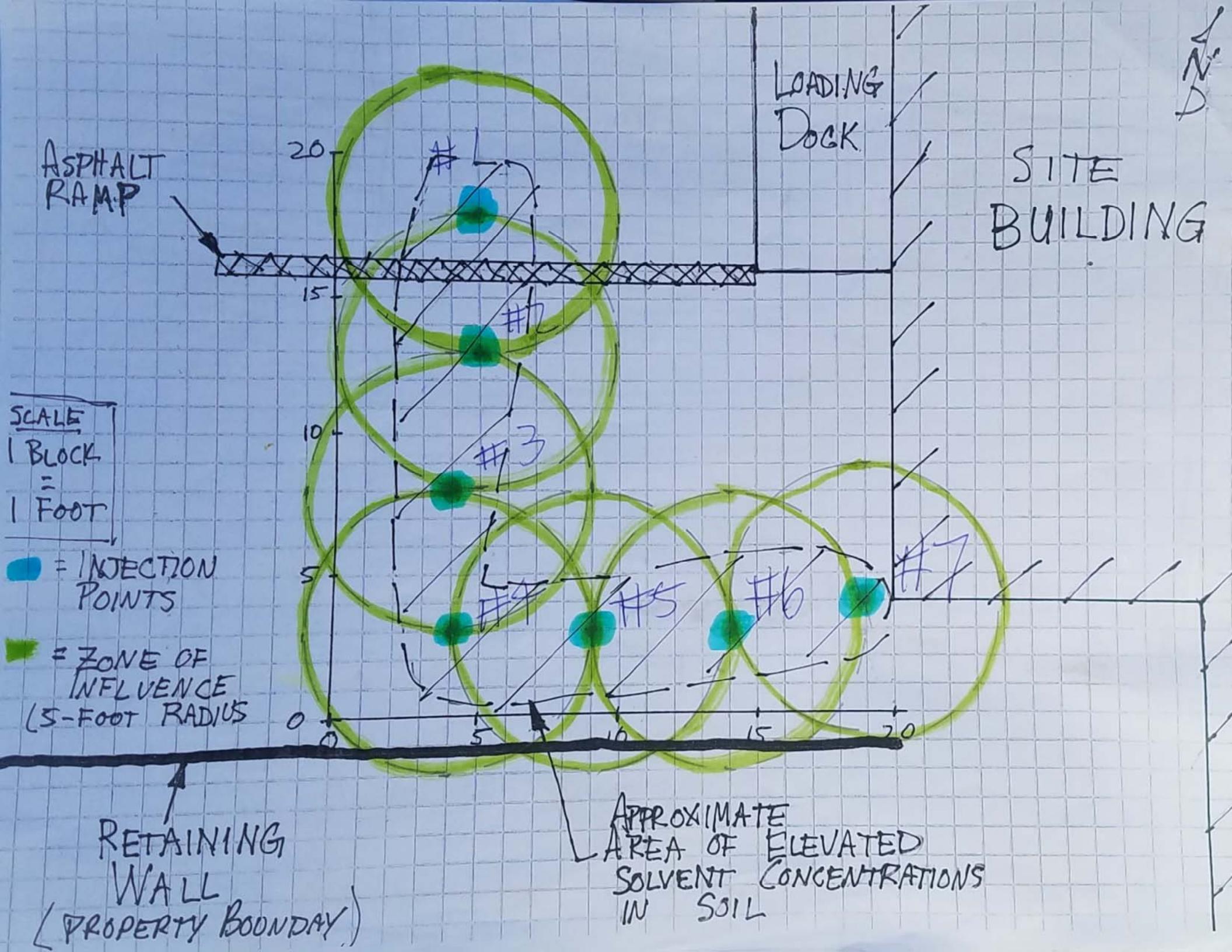
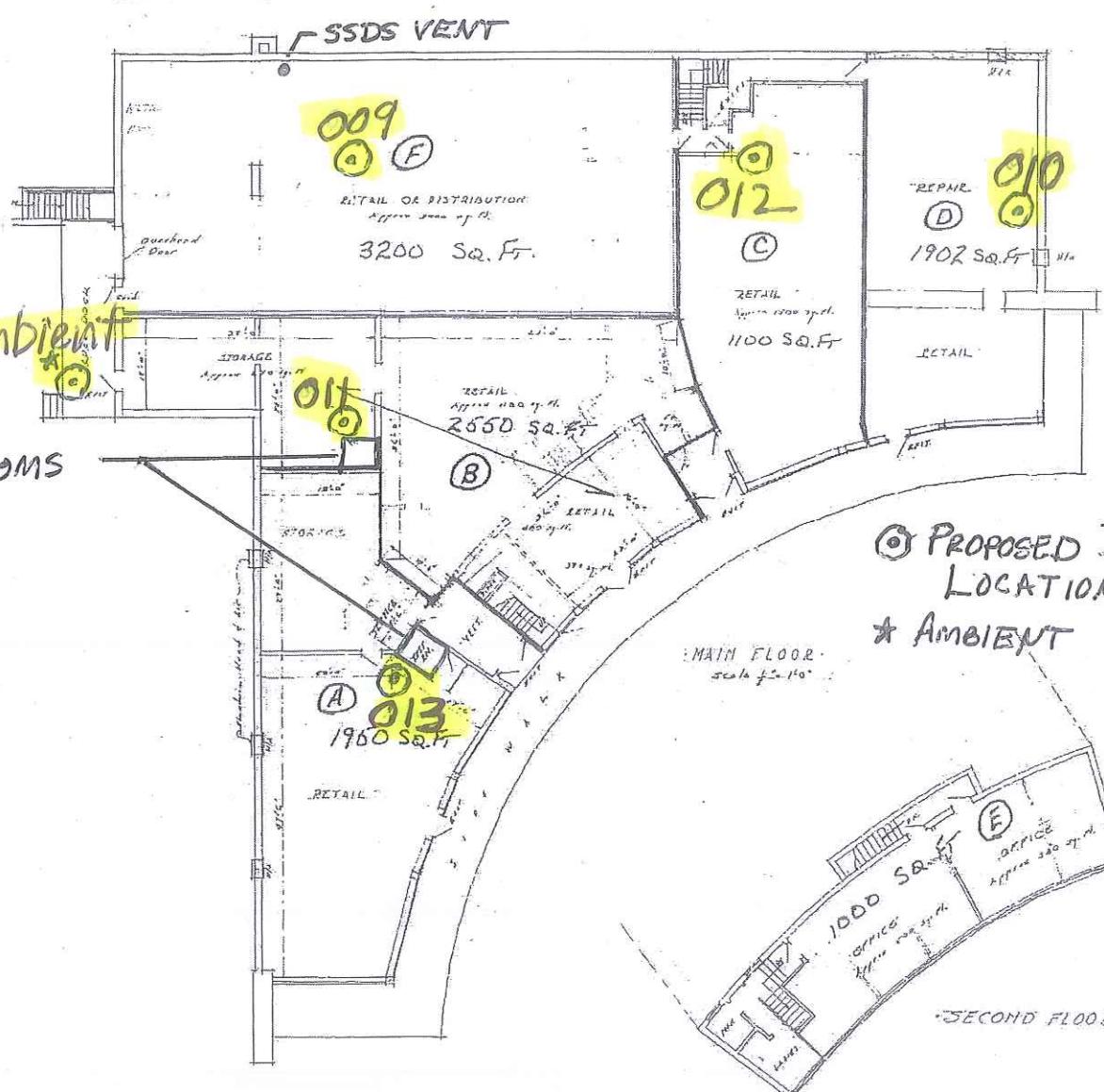
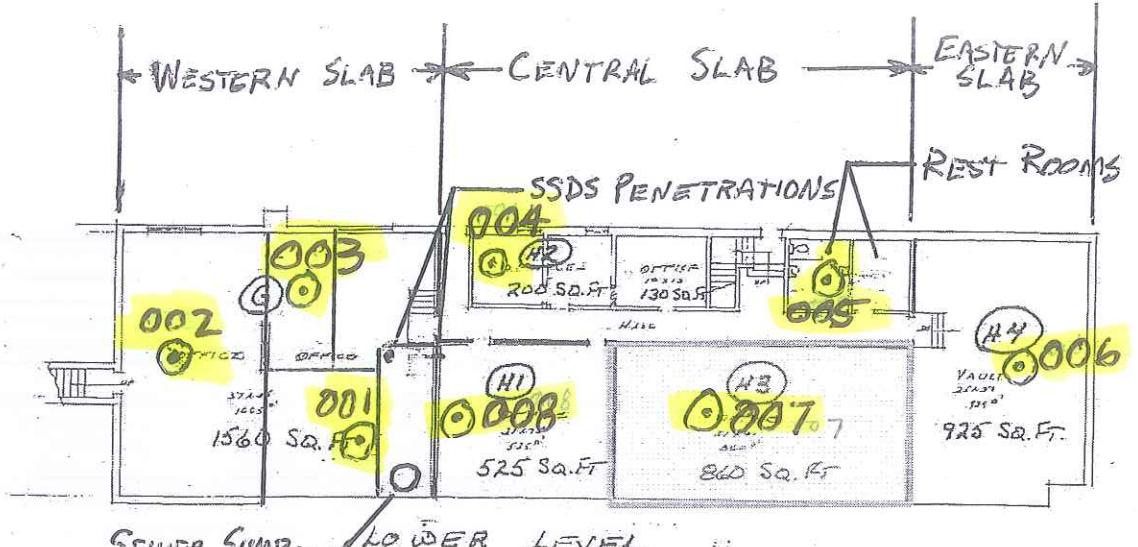


Figure 3 - Soil Gas Sampling Location Plan

Plaza 2331
2331 East Market Street
Springettsbury Township, York County, Pennsylvania

Legend





① Oct 2

Blow Off

PLAYA 2A 1331 Commercial Party
2331 East Market Street
York, Pennsylvania 17402

January 3 holes by VP-3
PVC Pipe 1-inch or 1.5

CONCRETE
LOADING
DOCK

SITE
BUILDING

Top of
Slope

Top of
Slope

EPS 338

EPS-337

EPS-336

SP-231/23

SP-221/21

SP-221/21A

RETAINING WALL

EPS-339

GAS
METER

APPROXIMATE
PROPERTY
BOUNDARY

SCALE:
1 BLOCK = 1 FOOT

Attachment F
PNDI Search Receipt

1. PROJECT INFORMATION

Project Name: **Remedial Investigation for historic contamination**

Date of Review: **12/2/2021 01:50:55 PM**

Project Category: **Hazardous Waste Clean-up, Site Remediation, and Reclamation, Spill (e.g., oil, chemical)**

Project Area: **0.75 acres**

County(s): **York**

Township/Municipality(s): **SPRINGETTSBURY TOWNSHIP**

ZIP Code:

Quadrangle Name(s): **YORK**

Watersheds HUC 8: **Lower Susquehanna**

Watersheds HUC 12: **Mill Creek**

Decimal Degrees: **39.974541, -76.681319**

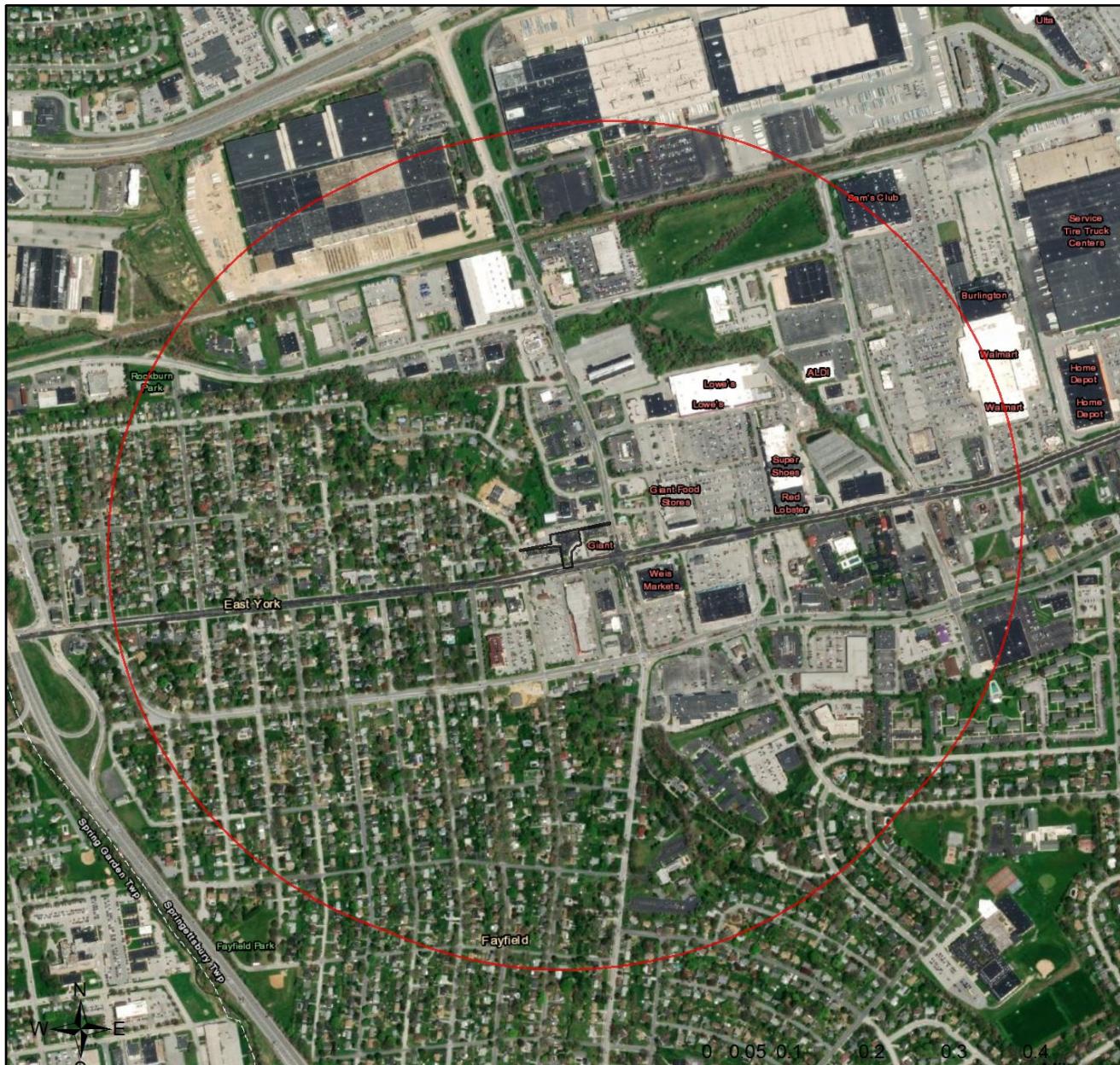
Degrees Minutes Seconds: **39° 58' 28.3485" N, 76° 40' 52.7497" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

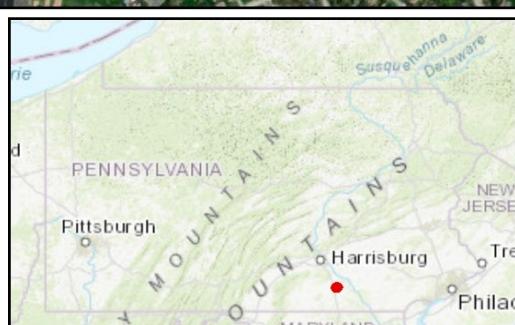
Remedial Investigation for historic contamination



Project Boundary

Buffered Project Boundary

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCan, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China



Remedial Investigation for historic contamination



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552

Email: RA-HeritageReview@pa.gov

PA Fish and Boat Commission

Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

U.S. Fish and Wildlife Service

Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Game Commission

Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Steven R. Vedder

Company/Business Name: Weaver Consultants Group, LLC

Address: 2225 Sycamore Street

City, State, Zip: Harrisburg, Pennsylvania 17111

Phone: (717) 585-1963 Fax: ()

Email: svedder@wcgrp.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Steven R. Vedder

applicant/project proponent signature

December 10, 2021

date

Attachment G

Personnel Qualifications



Steven R. Vedder

Senior Project Manager

EDUCATION

B.S., Environmental Resource Management,
Pennsylvania State University

CERTIFICATIONS

Pennsylvania Department of Environmental Protection Licensed
Tank Handler – UMR/AMR
Maryland Department of the Environment – UST Remover

Professional Summary

Twenty-One years' experience in environmental consulting and field services has provided opportunity to work on numerous projects managing and conducting all aspects of Phase I Environmental Site Assessments as set forth in ASTM Designation: E-1527, Phase II Site Investigations, asbestos and lead pre-renovation/demolition surveys, property condition assessments, underground and aboveground storage tank closures, an abandoned natural gas well plugging program, spill cleanup/remediation, waste transportation and disposition, and environmental oversight for construction projects for public and private sector clients. Experience has required data procurement in accordance with industry protocols, data interpretation in light of regulatory requirements, and report preparation to achieve project objectives and meet client expectations.

Project Experience

Environmental Site Assessments

Conducted numerous Phase I Environmental Assessments in Mid-Atlantic States including Pennsylvania, Maryland, New York, Ohio, West Virginia, Virginia, and Delaware as well as in various states nation-wide. Performed all aspects of field reconnaissance, research, and report preparation for environmental real estate assessments of industrial, commercial, and agricultural properties. Interface with State and local government, environmental, health, and emergency agencies.

Property Condition Assessment

Conducted numerous Property Condition Assessments (PCAs) for commercial properties in Connecticut, Indiana, New Jersey, Maryland, Pennsylvania, Kentucky, Virginia, and West Virginia. Performed all aspects of PCAs including field reconnaissance, research, and report and reserve analysis preparation for a national drug store and large multi-tenant shopping centers. Interface with State and local government, environmental, health, development, and emergency agencies.

Limited Site Investigation/Phase II Site Investigation

Coordinated, provided sub-contractor oversight, and conducted soil and/or ground water sampling for numerous sub-surface investigations as part of the due diligence process associated with the sale of commercial, industrial, and agricultural real estate. These investigations included excavation of solid materials disposal areas, soil screening during construction activities, classification and sampling of soil cores, borehole lithology logging, collection of confirmatory sampling, and preparation of technical narrative reports.

Impacted Soil Removal

In charge of oversight for transportation and disposal of impacted soil on projects involving contamination from releases of lead, various petroleum compounds, and chlorinated solvents. Generated Waste manifests, scheduled trucking, and corresponded with landfill officials to assure all soils were being properly disposed.

Ground Water Investigation

Supervised installation of monitoring wells in varying geologic formations utilizing direct push, hollow stem auger, and air-rotary drilling technologies, while interfacing with client and sub-contractor operators. Completed relative elevation surveys for well locations and measured static water levels to model ground water flow direction and conducted ground water sampling events designed to meet Pennsylvania, New Jersey, Maryland, New York, and Connecticut regulatory standards.

Storage Tank Installation



Coordinated, provided oversight, and performed tank installations: Including excavating, setting tanks, and piping and wiring of pumping station in accordance with current standards.

Storage Tank Closures

Coordinated and provided oversight for the permanent closure of numerous regulated and unregulated storage tanks. Conducted post closure assessment and directed excavation and stockpiling of impacted soils. Prepared closure reports documenting removal activities and interpreted results of laboratory analyses performed on post closure assessment samples in light of current standards.

Pennsylvania Act 2 Closures

Performed and assisted in the management of numerous investigative and remedial projects involving residential, industrial, commercial, and manufacturing facilities impacted by petroleum products, solvents, and other contaminants to allow the sites to secure Act 2 Releases of Liability. Tasks completed included soil and ground water sampling and remediation, aquifer testing, fate and transport modeling, sensitive receptor surveys, indoor air quality assessments, and reporting.

Abandoned Natural Gas Well Plugging Program

Coordinated and provided oversight for the plugging of numerous abandoned natural gas wells in accordance with a Consent Order and Agreement between a local utility company and the Pennsylvania Department of Environmental Protection.

Electrical Reliability Project

Coordinated and provided oversight for investigative tasks completed to permit the transportation and disposal of drilling spoils generated along an overhead electrical transmission right-of-way. Tasks completed included soil and ground water sampling utilizing direct push technology, development and implementation of Job Hazardous Analysis Forms and daily Take 5 Safety meetings and generating bill of lading documentation for the transportation and disposal of drilling spoils.

Spill Cleanup/Remediation Project

Coordinated and provided oversight for numerous spill incidents (transportation and facility-based spills) including initial response, investigative tasks, and remedial actions to demonstrate compliance with regulatory requirements.

Industrial Maintenance/Waste Transportation and Disposition

Coordinated and provided oversight for the completion of various project (including confined space tank cleaning) that require transportation and disposition of hazardous and non-hazardous waste streams in drums and bulk containers.

10 PUBLIC COMMENTS

An intent to remediate letter was not provided to WCG by the date of this report and thus no public comments were received by WCG from the Springettsbury Township during the public comment period.

11 SIGNATURES

"I, declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in §312.10 of 40 CFR 312" and

"I have the specific qualifications based on education, training, and experience to assess a Site of the nature, history, and setting of the subject Site.

This RIR was performed by, or under direct supervision of, the undersigned environmental professional. Resumes are included in **Attachment G - Personnel Qualifications**.

Steven R. Vedder

Steve Vedder

Senior Project Manager