SUPPLEMENTAL REMEDIAL INVESTIGATION REPORT
INDUSTRIAL OVERALL SERVICES
SITE # 360109

WORK ASSIGNMENT NO. D007619-07

Prepared for:

New York State Department of Environmental Conservation
Albany, New York

Prepared by:
MACTEC Engineering and Consulting, P.C.
Portland, Maine

MACTEC: 3612112221

NOVEMBER 2016

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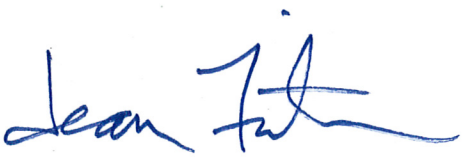
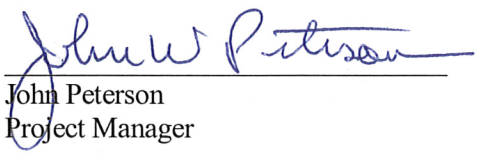


Jean Firth
Site Manager

Submitted by:



John Peterson
Project Manager

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

AOCs	areas of concern
Aztech	Aztech Technologies Inc.
bgs	below ground surface
cis-1,2-DCE	cis-1,2-dichloroethene
COC	contaminant of concern
CSM	Conceptual Site Model
DER	Department of Environmental Remediation
DNAPL	dense non-aqueous phase liquid
DUSR	Data Usability Summary Report
FAP	Field Activities Plan
FDR	field data record
FS	feasibility study
ft	feet
IDW	investigation derived waste
Industrial Overall	Industrial Overall Service Corporation
MACTEC	MACTEC Engineering and Consulting, P.C.
mg/kg	milligram(s) per kilogram
MNR	Metro-North Railroad
NYCRR	New York Codes, Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health

GLOSSARY OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

PCE	tetrachloroethene
PID	photoionization detector
PVC	polyvinyl chloride
Report	Supplemental Remedial Investigation Report
RI	Remedial Investigation
SCGs	standards, criteria and guidance values
SCO	Soil Cleanup Objective
Site	Industrial Overall Service Corporation site
SRI	Supplemental Remedial Investigation
SVI	soil vapor intrusion
TCA	trichloroethane
TCE	trichloroethene
TestAmerica	TestAmerica Laboratories
µg/cm^3	microgram(s) per cubic centimeter
µg/l	microgram(s) per liter
VC	vinyl chloride
VOC	volatile organic compound
WA	Work Assignment

EXECUTIVE SUMMARY

The Industrial Overall Service Corporation (Industrial Overall) Site (New York State Department of Environmental Conservation Site No. 360109) (Site) is located at 10 Bartels Place in New Rochelle, Westchester County, New York. It is 0.42 acres in size and resides on a slightly sloping irregular shaped parcel. The main Site feature includes a six-sided building which occupies the majority of the property and a small parking area located to the south and southwest of the building. The surrounding area is urban with a mix of commercial and residential structures.

The Site began operations in 1950 as a uniform and industrial clothing cleaning facility for heavily soiled clothing from auto body and gasoline dispensing businesses. In 1980, Workingman's Closet, a direct factory sales division of Industrial Overall which sells new and reclaimed work clothes, was opened. The Site owner indicated that the Site operated as a dry cleaning laundering facility in the past. The exact period of operation is unknown but has been reported as between the 1960's and the 1980's. Current operations at the Site include laundering linens and uniforms for restaurant and other businesses and retail uniform sales.

MACTEC Engineering and Consulting, P.C. conducted a Supplemental Remedial Investigation (RI) to evaluate the following areas where data gaps were identified in the RI Report:

- MetroNorth Railroad (MNR) – the area of contamination adjacent to the tracks southwest of the Site had not been delineated in soil or groundwater;
- Sewer Line –both inside the pipe and in bedding material surrounding the pipe was identified as a potential soil vapor migration pathway; and
- 1,1,1- Trichloroethane (TCA) groundwater contamination – the source of 1,1,1-TCA detected in groundwater which appears to be originating upgradient of the lint trap had not been identified.

Subsequent to submittal of the Draft RI an additional data gap was identified:

- Site building – at a potential location of the former dry cleaning machine which was identified by the Site Owner;

Results of this investigation indicates:

- The former dry-cleaning machine location, newly identified by the Site owner, is not an additional source of contamination to soil and shallow groundwater in this area of the Site;

- The source of 1,1,1-TCA in groundwater appears to be the result of an upgradient source;
- The observed contaminants on the MNR property generally correspond with the surface disposal areas (western debris pile, northwestern debris pile and along the MNR tracks),and the extent of the soil contamination has be vertically and laterally delineated;
- No soil contamination was observed in the sanitary sewer bedding materials in the vicinity of the lint trap source area;
- The sanitary sewer line is not acting as a preferential pathway for contaminants originating at the lint trap to migrate and enter into nearby structures as soil vapor; and
- Vapors were detected in storm drains downgradient of the Site which may be a result of volatilization from groundwater entering the storm system.

The Qualitative Exposure Assessment indicated ecological receptors are not present; however; a potential completed exposure pathways exist for:

- Direct exposure to workers conducting sub-surface activities in the vicinity of the identified contaminated soil, groundwater or soil vapor.

Based on the results of the Supplemental RI the following data gap was identified:

- The source of and migration pathway for contaminated vapors entering a residential structure through the sanitary sewer line should be further investigated.

1.0 INTRODUCTION

This Supplemental Remedial Investigation (SRI) report (Report) has been prepared by MACTEC Engineering and Consulting, P.C. (MACTEC) in response to Work Assignment (WA) No. D007619-07 from the New York State (NYS) Department of Environmental Conservation (NYSDEC) for the Industrial Overall Service Corporation (Industrial Overall) site (Site) in New Rochelle, Westchester County, New York (Figure 1.1). The Site is listed as a Class 2 Inactive hazardous waste site; NYSDEC Site Number 360109, in the Registry of Hazardous Waste Sites in NYS.

Based on the findings of the Draft RI, MACTEC identified data gaps and recommended that these gaps be addressed prior to implementing a remedial action. These data gaps included:

- Delineate the extent of contamination on the Metro-North Railroad (MNR) property
- Evaluate the potential for Dense Non-Aqueous Phase Liquid (DNAPL) and/or soil contamination to exist along the sanitary sewer line
- Delineate the extent of contamination in the bedrock south of the Site
- Delineate the extent of contamination downgradient of the Site
- Evaluate the potential upgradient source(s) of 1,1,1-trichloroethane (TCA) that is contributing to groundwater contamination at the Site.

Subsequent to submitting the Draft Remedial Investigation (RI) Report the Site owner provided additional information related to the location of the dry-cleaning machine within the building as well as the years of operation that differed from the previous available information. The new information identified the former dry-cleaning machine location in the western portion of the building near the boiler room rather than the area previously investigated which is in the northern portion of the building. The owner also indicated that the Site operated as a dry-cleaner from the 1960's to the early 1980's.

Based on this additional information and the data gaps identified during the Draft RI the NYSDEC requested that MACTEC perform a SRI. The RI report was finalized in November 2016 (MACTEC, 2016). The purpose of the SRI was to provide additional data to support the development of a Focused Feasibility Study (FS) for remediation of onsite sources.

The SRI focuses on the following areas:

- Site building – at the reported location of the former dry cleaning machine and in the vicinity of the 1,1,1 – TCA groundwater contamination;
- MNR – along the tracks southwest of the Site, and;
- Sewer Line –along the sewer line both inside the pipe and in bedding material surrounding the pipe.

This Report presents the technical scope of work for SRI field activities and presents and interprets the data collected. The SRI has been conducted in accordance with the WA and associated WA Amendments (WA No. D007619-07.1 through D007619-07.7), as well as with applicable portions of the following documents:

- NYSDEC Department of Environmental Remediation (DER)-10 "Technical Guidance for Site Investigation and Remediation" (NYSDEC, 2010);

1.1 REPORT ORGANIZATION

The SRI report is structured in general in accordance with the NYSDEC DER-10 Guidance (NYSDEC, 2010). The SRI includes Sections 1.0 to 6.0, and associated Appendices.

Section 1.0: Discusses the purpose of the SRI, Site history and previous investigations.

Section 2.0: Presents the specific scope of work for the SRI.

Section 3.0: Summarizes the physical characteristics of the Site and surrounding area. This includes results of physical characteristics as observed during the SRI field program.

Section 4.0: Presents results of the analytical data and discusses the nature and extent of contamination.

Section 5.0: Discusses the revised Conceptual Site Model (CSM).

Section 6.0: Discussed the revised Qualitative Exposure Assessment for the sanitary sewer.

Section 7.0: Presents the summary and conclusions

The Report is supplemented by the following attached documents:

- Appendix A – Site Photographs
- Appendix B – Field Data Records (FDRs)
- Appendix C – Manifest for off-site Transport and Disposal of Waste Materials
- Appendix D – Site Survey Data
- Appendix E – Data Usability Summary Reports (DUSRs)

1.2 PURPOSE OF SUPPLEMENTAL REMEDIAL INVESTIGATION

The SRI was conducted as a result of detections of chlorinated solvents in groundwater at and near the Site exceeding the NYS Class GA groundwater standard as defined in Title 6 of the New York Codes, Rules, and Regulations (NYCRR) Part 700-705 (NYS, 1999b). Contaminants of concern from former Site-related processes, include tetrachloroethene (PCE) and trichloroethene (TCE), which are listed as hazardous wastes under Title 6 NYCRR Part 371 (NYS, 1999a). This SRI was performed to evaluate the following technical objectives:

- potential additional source areas on the Site, which may be acting as a continuing source of contamination to groundwater beneath the Site; and,
- contaminant migration pathways and potential receptors (i.e., potential present and future human health and ecological exposure pathways) including soil vapor intrusion (SVI).

1.3 SITE BACKGROUND

Background information related to the Site history was obtained during a Site visit conducted in May 2012 and 2015 as well as by reviewing documents pertaining to the history of Site operations and past releases of contamination that were supplied by the NYSDEC. The information obtained was used to develop a CSM, assess data gaps in the Site understanding, and prepare the RI Field Activities Plans (FAP) for the RI field investigation. The Site background information is summarized in the RI Report.

1.3.1 Site Location and Description

The Site is located at 10 Bartels Place in New Rochelle, Westchester County, New York (Figure 1.1) and is 0.42 acres in size and resides on a slightly sloping irregular shaped parcel. The main site feature is a six-sided building which occupies the majority of the property. The remainder of the site is a small parking area located to the south and southwest of the building. The property is an active business, Apparel + Plus, which is owned by Robert O'Brien. The surrounding area is urban with a mix of commercial and residential structures. The Site is bordered to the northwest by the MNR and to the west and south by residential dwellings.

1.3.2 Site History

The Site has been operating at the current location as an uniform and industrial clothing laundering facility (Industrial Overall), historically cleaning heavily soiled clothing from auto body and gasoline dispensing businesses since 1939 (NYSDEC, 2011). Based on a Sanborn Fire Insurance map from 1931, the Site previously operated as an automobile garage, with the capacity to store/service 275 cars and housed four gasoline tanks on the northeastern corner of the property. In 1980, Workingman's Closet, a direct factory sales division of Industrial Overall which sells new and reclaimed work clothes, was opened. The Site reportedly operated as a dry cleaning laundering facility from the 1960's to the early 1980's.

1.4 REMEDIAL INVESTIGATION

A RI was completed at the Site between March 2012 and April 2015 to evaluate the nature and extent of contamination in soil, groundwater, soil vapor, and pore water both on and off-site. Results of this investigation indicate:

- Two sources of contamination (primarily PCE) were identified at the Site 1) the lint trap and 2) the debris disposal areas;
- PCE concentrations in soil on the Site and MNR property adjacent to the Site exceed the NYS standards, criteria, and guidance values (SCGs);
- Concentrations of PCE in overburden and bedrock groundwater exceed the NYS groundwater criteria (5 micrograms per liter [µg/L]) on the Site, and extend approximately 1,900 feet (ft) downgradient of the Site;
- PCE in residential sub-slab soil vapor and indoor air exceeded the NYS Department of Health (NYSDOH) recommended guidance values at two residential structures and mitigation measures have been implemented;
- Four additional residential structures require ongoing monitoring based on the NYSDOH SVI matrix; and
- The sanitary sewer line was identified as preferential pathway for contaminated vapor to enter into nearby structures.

A Qualitative Exposure Assessment indicated ecological receptors are not present; however; complete exposure pathways exist for:

- Direct exposure to contaminated media on-site (soil, soil vapor, groundwater, and sludge), and
- SVI into nearby structures.

During the RI, two interim remedial measures were implemented to mitigate direct exposure to contaminated soil on an adjacent residential property and to remove a source of contamination within the on-site building.

Site features observed during the initial Site visit and subsequent investigations conducted for the RI, including the Site building layout and the potential locations of the former dry cleaning unit, are detailed on Figure 1.2.

1.5 SITE AREAS OF CONCERN

Based on findings from the remedial field investigation and for discussion purposes in this report, the Site vicinity has been divided into areas of concerns (AOCs). An AOC is defined as "a location (or former location) at a site where contaminants are known or suspected to have been discharged. These include locations where contaminants were generated, manufactured, refined, transported, stored, handled, treated, disposed or where they have or may have migrated" (NYSDEC, 2010). The following AOCs were investigated during the SRI:

- **Site Building Data Gap Investigation:**
  1) potential contamination in soil and shallow groundwater in the vicinity of the former dry-cleaning machine, recently identified by the Site Owner, and;
  2) a potential source of 1,1,1-TCA upgradient (north) of the lint trap.
- **MetroNorth Railroad Data Gap Investigation:**
  1) the vertical and horizontal extent of soil contamination along the railroad tracks located topographically upgradient and south of the Site.
  2) if contamination may be migrating to groundwater from shallow surficial contamination previously detected in this area.
- **Sewer Line Data Gap Investigation:**
  1) potential soil contamination adjacent to the sewer line in the vicinity of the lint trap may be a continuing source contamination to groundwater and soil vapor that is migrating from the Site.
  2) the extent of PCE migration as soil vapor along sewer line (acting as a potential preferential pathway) along Bartels Place and Pine Street, both inside the pipe and in the bedding materials surrounding the sewer pipe.

2.0 SCOPE OF WORK

The SRI fieldwork was conducted in accordance with the specifications presented in the SRI FAP (MACTEC, 2015). Analyses were performed by, TestAmerica Laboratories (TestAmerica), of Amherst, New York, a NYSDOH approved laboratory, in compliance with the NYSDEC Analytical Services Protocols (NYSDEC, 2005).

Field investigations conducted under the SRI were carried out in October 2015. General activities, including health and safety, decontamination and sampling are described in the following subsections. A summary of the SRI field investigation program is presented in Table 2.1. Figures 2.1A and 2.1B show the SRI sampling locations. Photos taken during the SRI are provided in Appendix A and field data records FDRs documenting SRI sampling activities are included in Appendix B.

2.1 HEALTH AND SAFETY

The SRI fieldwork was conducted in compliance with the Site specific Health and Safety Plan in Level D personal protection equipment (MACTEC, 2012). Daily health and safety meetings were conducted prior to the commencement of fieldwork each day.

2.1.1 Air Monitoring

Direct push investigations were conducted within the interior of the Site building using a Geoprobe® rig. While conducting the interior direct push investigations, the exhaust from the Geoprobe® rig was vented to the exterior air using three-inch flexible steel piping. The air inside the Site building from approximately five ft above ground surface was continuously monitored using a four gas meter personal monitoring device (VRAE model 7800) to evaluate conditions within the breathing zone. Atmospheric conditions including oxygen, the lower explosive limit, methane and carbon monoxide were monitored. Breathing zone atmospheric conditions within the Site building remained generally consistent with exterior atmospheric conditions; therefore, no mitigation measures were warranted, with respect to operating the drill rig inside the Site building. Four-gas meter readings were recorded by field personnel either in the daily log book or on FDRs with the associated investigation.

2.2 GEOPHYSICAL SURVEYS

Geophysical surveys conducted at the Site are listed on Table 2.1 and had one or more of the following objectives:

- To screen proposed subsurface investigation locations for the presences of utilities or other subsurface structures;
- To identify potential preferential pathways as a result of the physical conditions within the sanitary sewer system

2.2.1 Subsurface Utility Clearance and Sanitray Sewer Line Inspection

A geophysical survey was conducted at the Site, along Bartels Place and Pine Street to evaluate the location and condition of the sanitary sewer system in preparation of the field sampling activities. The survey was conducted by New York Leak Detection of Jamesville, New York. Piping integrity was evaluated by using a downhole camera to view current conditions of the interior of the pipes. The camera was electromagnetically located from the surface of the street in conjunction with a calibrated distance counter on the feeding mechanism. Piping potentially containing a compromised integrity (containing holes, scarring or ruts), therefore having the potential to release source material that may have been discharged through the sanitary sewer system into the surrounding soil was described in the daily field notes and marked on the ground surface. Possible lateral pipe connections to adjacent structures were also identified and marked on the ground surface.

In the event the downhole camera was unable to be advanced due to bends in the pipe or obstructions a traceable rodder was fed through the trunk line and electromagnetically located from the surface to give the horizontal centerline and approximate depth to the bottom of the sewer pipe.

2.3 SOIL SAMPLING

Approximately 55 soil samples were collected during the SRI and were analyzed for volatile organic compounds (VOCs) by method 8260 to evaluate potential source areas and the extent of contamination.

Soil samples were collected, identified in Table 2.1, by the following methods:

- Direct Push:
  - Aztech Technologies, Inc. (Aztech) used a track-mounted direct-push Geoprobe® 6610 DT drill rig.
- Hand Sampling:
  - Geoprobe® hand tools; and,
  - Stainless steel spoon.
- Monitoring Well Installation:
  - Hollow Stem Auger – Overburden wells
    - Aztech used a track-mounted direct-push Geoprobe® 6610 DT drill rig.
  - Rotary Wash – Bedrock well
    - Aztech used a track-mounted direct-push Geoprobe® 6610 DT drill rig.

Soils were screened for the presence of VOCs using a photoionization detector (PID) with an 11.7 eV lamp. Soil description, classification, VOC headspace reading, and observations were recorded on a FDR, included in Appendix B.

2.4 SLUDGE SAMPLING

During the Site Building data gap investigation, sludge and fibers were observed in the slab floor drain/trench in the vicinity of the former dry-cleaning machine. Four grab samples (DC-1 through DC-4) were collected from the bottom of the channel for VOC analysis. During the SRI sanitary sewer line survey sludge, potentially related to Site operations, was observed in the manhole downgradient from site on Bartels Place (MH-01) (Figure 2.1A). A sample was collected from the bottom of the manhole using a stainless steel spoon for VOC analysis to evaluate the potential impacts that sludge may be contributing to the subsurface environment.

2.5 MONITORING WELL INSTALLATION AND GROUNDWATER SAMPLING

Monitoring wells were installed and groundwater samples were collected to evaluate the extent of contamination in groundwater in the vicinity of 1) the former dry cleaning machine 2) a potential source of 1,1,1-TCA upgradient (north) of the lint trap and 3) the MNR railroad tracks. Sampling was

conducted in October 2015, as detailed in Table 2.1. A total of three wells were installed in and near the building and two groundwater grab samples were collected adjacent to the MNR railroad tracks. An additional four existing wells were also samples to compare potential fluctuations in contaminant levels from previous sampling events. The existing wells sampled were PZ-22, PZ-33, PZ-34, and PZ-35.

2.5.1 Monitoring Well Installation

To characterize groundwater quality and provide data to evaluate groundwater flow direction, three groundwater monitoring wells were installed as part of the SRI. Upon completion of well installations, the newly installed monitoring wells were developed by over-purging using a peristaltic pump. Monitoring well construction details and groundwater elevation measurements for wells evaluated during the RI and SRI are presented in Table 2.2 and Table 2.3, respectively. Monitoring well diagrams and development FDRs are included in Appendix B.

2.5.2 Groundwater Sampling

Groundwater was sampled following low-flow sampling procedures and was documented on FDRs (Appendix B). Low-flow groundwater samples were collected from the following types of wells at the Site:

- Microwells
    - Locations identified with the prefix of PZ or MW;
    - Constructed of either ¾- inch or one-inch polyvinyl chloride (PVC); and,
    - Installed in overburden or highly weathered bedrock.

In addition to low-flow sampling, two groundwater grab samples were also collected at the Site. The following types of groundwater grab samples included:

- Direct push drill rig samples using a temporary one-inch PVC monitoring well.

The groundwater samples, both using low-flow sampling techniques and grab samples are identified on Table 2.1. Groundwater samples were collected and submitted to TestAmerica for VOC analysis by method 8260.

2.6 SOIL VAPOR SAMPLING

VOCs have the potential to partition from soil and groundwater to soil vapor and may migrate through the soil column. Soil vapor can be drawn into structures through openings and cracks in foundations and floor slabs and along preferential pathways created by underground utilities. To evaluate this potential, indoor air sampling and exterior soil vapor grab sampling was conducted in the vicinity and downgradient of the Site. A summary of the soil vapor and indoor air sampling program is included in Table 2.1.

2.6.1 Indoor Air Sampling

Indoor Air sample screening was conducted at two residential structures (Structures 1 and 10) in the vicinity of the Site on October 27, 2015 (Figure 2.1A). Indoor air sample screening locations were selected based on field observations, including near the sanitary sewer lines in each structure. The samples were collected consistent with the Hapsite GC/MS SOP provided in the SRI FAP (MACTEC, 2015).

2.6.2 Exterior Soil Vapor Grab Sampling

To evaluate soil vapor concentrations potentially migrating hydraulically downgradient of the site along the sanitary sewer line, 16 soil vapor grab samples were collected along Bartels Place (SVG-BP02-03 through SVG-BP18-03). A further eight soil vapor grab samples were collected on Pine Street (SVG-PS06-03 through SVG-PS14-01). Nine sewer line air samples were collected from manholes and storm sewer catch basins on Bartels Place and Pine Street. A summary of the soil vapor grab samples and the sewer line air samples is included in Table 2.1. The sample locations in the vicinity of the Site on Bartels Place and downgradient on Pine Street are shown on Figures 2.1A and 2.1B, respectively.

Soil vapor grab sampling points were advanced using hammer drill and an auger bit to between 1 and 6 ft below ground surface (bgs) based on the depth of the sewer at the sample location and field conditions. Sample collection was completed in accordance with the methods outlined in the SRI FAP (MACTEC, 2015). Prior to sample collection the percentages of oxygen and carbon dioxide (using an RKI Eagle Gas Portable monitoring device) in both soil vapor and ambient air were compared, verifying the collection of soil vapor and not ambient air. Soil vapor and sewer air samples were analyzed onsite

using an onsite GC/MS (Hapsite). A summary of soil vapor and air sample observations are documented on a FDR which is included in Appendix B.

2.7 INVESTIGATION DERIVED WASTES

Investigation derived waste (soil and water) generated during installation, development and sampling of monitoring wells was collected in 55-gallon drums. Investigation derived waste (IDW) water with minimal suspended particulate was and treated through an inline Filter Specialists, Inc. X100 bag filter using a 0.25 micron filter, prior to treatment with a granular activated carbon unit and prior to discharge.

Soils generated during drilling activities were screened using a PID and containerized in 55-gallon drums if readings greater than five parts per million were observed. Containerized soil and groundwater were transported under waste manifests and disposed at NYS approved facilities by Clean Venture, Inc. through Global Remediation of Taunton, Massachusetts. Manifests for IDW generated as part of the SRI are included in Appendix C.

2.8 ELEVATION SURVEYS

Surveying was performed for newly installed monitoring wells, soil borings, and select sewer line features (e.g. manhole covers) by a licensed surveyor, Prudent Engineering from Syracuse, New York. Horizontal and vertical locations were provided to MACTEC and entered into a database for use with geographic information system software. Horizontal locations were tied to the NYS Plane Coordinate System using North American Datum of 1983, and measured to an accuracy of 0.1 ft. Vertical elevations of groundwater monitoring wells were tied to mean sea level, using National Geodetic Vertical Datum of 1988, and measured to an accuracy of 0.01 ft. Results of the monitoring well elevation surveys are provided in Appendix D.

Sample locations that were not surveyed include the indoor air, soil vapor, and sewer air sampling points. These locations were surveyed using a Trimble Global Positioning System, or measured relative to fixed structures and approximately plotted using aerial photographs by MACTEC field personnel.

3.0 PHYSICAL SETTING

The physical characteristics of the Site and study area, including topography, climate, surface water, groundwater hydrology and geology, are described in the RI Report.

3.1 SUPPLEMENTAL REMEDIAL INVESTIGATION PHYSICAL SETTING OBSERVATIONS

Based on field observations during the SRI geologic, topographic and surface water hydrology characteristics are consistent with those described in the RI Report.

Groundwater hydrology at the Site was evaluated during the SRI through a round of groundwater elevation measurements collected from the newly installed SRI wells and 30 other wells installed during previous investigations. Figure 3.1 presents the interpreted overburden groundwater contours from the synoptic water levels collected in October 2015. Figure 3.2 presents the interpreted bedrock groundwater contours from the same event. Overburden and bedrock groundwater in the vicinity of the Site exhibited similar directional flow paths consistent with those observed during the course of the RI.

4.0 NATURE AND EXTENT OF CONTAMINATION

This section presents the results of soil, groundwater, soil vapor, and indoor air samples collected during the SRI. Laboratory results were reviewed and evaluated against data quality objectives. To determine whether the laboratory data met the project specific criteria for data quality and DUSRs were prepared. The DUSRs were prepared for each batch of samples analyzed in accordance with the "Guidance for the Development of Data Usability Reports" (NYSDEC, 2010) and are included as an appendix to this Report (Appendix E). The data presented in this report meets the data quality objectives for this SRI.

Analytical Results were compared to the following SCGs:

- Groundwater analytical results were compared to the NYS Class GA Groundwater Quality Standards from 6 NYCRR Parts 700-705 (NYS, 1999b), as well as to guidance values from the NYSDEC Technical and Operational Guidance Series 1.1.1 (NYSDEC, 1998), as appropriate.
- Soil analytical results were compared the NYSDEC Cleanup Objectives included in 6 NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives for Protection of Groundwater, Residential, Commercial and Industrial use scenarios (NYS, 2006).
- Soil vapor and indoor air were evaluated using the air guidelines provided in the NYSDOH guidance document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York," (the NYSDOH Guidance) dated October 2006 (NYSDOH, 2006). Background - Soil and groundwater samples were collected from a location upgradient of the Site for comparison to onsite samples.

Applicable notes for each of the sample results tables are presented in Table 4.1.

As discussed in Section 1.5 and the RI, AOCs have been defined for the Site including: the Site, the MNR Property and the sanitary sewer line. The Site, MNR Property, and soil samples for the sanitary sewer all include source areas identified in the RI and are discussed together below. The source areas contained chlorinated solvents, more specifically PCE and TCE; therefore, the discussion of results will primarily focus on PCE and TCE.

4.1 SOIL/BEDROCK SAMPLE RESULTS

A total of 55 soil/bedrock samples were collected as part of the SRI from eight locations on Site, 10 locations on MNR property, and one location upgradient of the site for background comparison. Five

sludge samples were collected from four locations on Site within a floor drain/trench and one location downgradient of the Site within a sanitary sewer structure. Sample results show VOCs (primarily PCE and TCE) are present exceeding Soil Cleanup Objectives (SCOs) in surface (0 – 2 ft bgs), and subsurface soil (greater than 2 ft bgs) on and in the vicinity of the Site. Based on the objectives of the SRI, soil sample results are organized and tabulated by AOC and soil type. The background sample results based on soil type are discussed with the Site results. Soil sampling results are presented in the following tables and figures:

Table No.	Title
4.2	Site Surface Soil VOC Results
4.3	Site Subsurface Soil VOC Results
4.4	Railroad Property Surface Soil VOC Results
4.5	Railroad Property Subsurface VOC Results
4.6	Sludge – VOC Results

Figure No.	Title
4.1	RI & SRI PCE Soil Results

4.1.1 Site and Railroad Property Surface Soil Sample Results

Surface soil was collected from two locations for VOC analysis from the vicinity of the Site. A review of the Site surface soil results collected during the SRI indicate the following findings:

- Four VOC compounds were detected in onsite surface samples;
- PCE was detected at concentrations exceeding the Protection of Groundwater SCO in 1 sample (SS-501) and TCE in one sample (SS-504);
    - Exceedances for Protection of Groundwater were associated with separate AOCs and are consistent with the sample results from the RI in the vicinity of these locations;
- Concentrations of contaminants of concern (COCs) were not detected in excess of Commercial or Industrial SCOs in Site surface soils.

A background surface soil sample was not collected as part of this investigation.

Surface soil was collected from nine locations on MNR property for VOC analysis. A review of the MNR surface soil results indicate the following findings:

- Ten VOCs were detected;
- PCE was detected at concentrations exceeding the protection of groundwater SCO in 5 samples from 5 locations;
- The Residential SCO was also exceeded for PCE in three samples;
- The Protection of Groundwater and Residential SCO exceedances are consistent with those observed in RI samples collected in the vicinity of the SRI sample points;
- No sample results exceeded the Commercial and Industrial SCOs.

4.1.2 Site and Railroad Subsurface Soil Sample Results

Eighteen subsurface samples were collected on the Site at depths ranging in depths from 2 to 16 ft bgs from eight locations for VOC analysis. Three subsurface samples were collected at one location upgradient of the Site for VOC analysis. Soil samples were collected from varying depths to evaluate vertical extent of contamination. A review of the Site and background subsurface soil results indicate the following:

- cis-1,2-dichloroethene (cis-1,2-DCE) and PCE were detected in samples from the vicinity of the potential drycleaner; concentrations did not exceed the SCOs;
- Samples from location GS-504 were collected to evaluate a potential source of 1,1,1-TCA upgradient of the lint trap. 1,1,1-TCA was detected, however, concentrations did not exceed the SCOs; and.
- Sample locations GS-506, GS-507 and GS-508 were collected near the sanitary sewer line leaving the lint trap to evaluate the potential presence of source material in the bedding material. Samples from 2-3 ft bgs, which represent the bottom of the sanitary sewer line did not have concentrations exceeding the SCOs. Samples collected near and below the groundwater table have concentrations of PCE exceeding the Industrial SCO.

The subsurface soil sample results collected during the SRI were consistent with the samples collected during the RI. The majority of the subsurface samples exceeding the SCOs on Site were located in native materials (sand and highly weathered bedrock) either adjacent to areas interpreted to contain source materials, or from soils hydraulically downgradient from interpreted source areas, suggesting the contamination is likely due to groundwater migration from source areas (lint trap (Table 4.3; Figure 4.1)).

Areas with exceedances of SCOs in the subsurface for TCE and vinyl chloride (VC) were generally co-located, further indicating that biodegradation of chlorinated solvents via reductive dechlorination is occurring.

Twenty-one subsurface samples were collected from 10 locations on MNR property for VOC analysis. A review of MNR subsurface soil results indicate the following:

- PCE was detected at concentrations exceeding the protection of groundwater SCO at two locations (GS-301 and GS-401) both in the 5-6 ft bgs interval.

Subsurface exceedances of PCE property generally correspond with surface disposal areas (western debris pile, northwestern debris pile and along the MNR tracks (Figure 4.1)) and are consistent with the RI results.

The distribution of contaminants both above and within the groundwater table (Table 4.5) is consistent with what may result from disposing source materials on the ground surface (not containing an impervious material). Precipitation and surficial overland run-off from higher topographical areas would be the main transport mechanism for migration of contamination to deeper soils and thus groundwater.

4.1.3 Sludge Sample Results

Five sludge samples were collected and analyzed for VOCs during the SRI field activities. One sample was collected from the sanitary sewer manhole (MH-001) downgradient from the Site. Four samples (DC-1 through DC-4) were collected from the bottom of a drainage channel inside the building in the vicinity of the old dry cleaner. A review of the data from these samples indicate the following:

- Detected PCE, TCE, and cis-1,2-DCE concentrations did not exceed SCOs;
- VC was detected above SCOs (Protection of Groundwater) at 0.14 milligram per kilogram (mg/kg), in the sanitary sewer sample.

4.2 GROUNDWATER SAMPLE RESULTS

Groundwater samples were collected from seven monitoring wells at the Site, one monitoring well upgradient of the Site, and from two grab sample locations on the Railroad property adjacent to the Site.

Groundwater sampling locations are shown on Figure 2.1A. Groundwater results are presented in the following tables and figures:

Table No.	Title
4.7	Site and Railroad Property Groundwater VOC Results

Figure No.	Title
4.2	RI & SRI PCE Concentrations in Overburden Groundwater
4.3	RI & SRI PCE Concentrations in Bedrock Groundwater
4.4	RI & SRI 1,1,1-TCA Concentrations in Overburden Groundwater
4.5	RI & SRI 1,1,1-TCA Concentrations in Bedrock Groundwater

4.2.1 Site Groundwater Sample Results

Seven groundwater samples were collected from seven locations on Site for VOC analysis. One additional background sample was collected upgradient of the Site for VOC analysis for comparison to the onsite results. A review of the Site groundwater results indicate the following findings:

- PCE was detected in seven samples at concentrations exceeding the GA Standard (5 µg/l);
    - The highest concentration of PCE detected in Site groundwater was interpreted to be located adjacent to the potential source area beneath the lint trap at a concentration of 17,000 µg/l (PZ-34);
- TCE concentrations were detected in six samples exceeding the GA Standard (5 µg/l);
    - The highest concentration of TCE detected in Site groundwater was interpreted to be located adjacent to the potential source area beneath the lint trap at a concentration of 13,000 µg/l (PZ-34);
- 1,1,1-TCA concentrations were detected in four samples exceeding the GA standard (5 µg/l);
    - The highest concentration of 1,1,1-TCA was detected in the upgradient background sample (MW-505) at a concentration of 910 µg/l and generally decreased hydraulically downgradient across the Site.

In general contaminant concentrations observed on Site during the SRI did not deviate significantly from the relative locations and concentrations observed during the RI. The impacts of contaminants in bedrock in the vicinity of the former dry cleaning unit could not be assessed due to field limitations on the bedrock well installation. The 1,1,1-TCA concentration observed in the upgradient sample at MW-505 further indicates that an upgradient source is contributing to the concentrations observed on Site.

4.2.2 Metro North Railroad Groundwater Sample Results

Two groundwater grab samples were collected from two locations on the MNR property for VOC analysis. A review of the MNR groundwater results indicate the following findings:

- PCE was detected in both samples at concentrations exceeding the GA Standard;
- TCE was detected in one sample at concentrations exceeding the GA Standard.

In general the contaminant concentrations observed in groundwater on the MNR are consistent with the RI results. The observed contaminants on the MNR property generally correspond with the surface disposal areas (western debris pile, northwestern debris pile and along the MNR tracks (Figure 4.1)).

4.2.3 Extent of Groundwater Contamination

Figures 4.2 and 4.3 presents the extent of PCE contamination in groundwater based on the RI and SRI. As shown on these figures, Site related contamination was detected in groundwater over 1,900 ft downgradient of the Site. Figures 4.4 and 4.5 present the extent of 1,1,1-TCA contamination in groundwater based on the RI and SRI data. As shown on these figures the 1,1,1-TCA originates upgradient of the Site.

4.3 INDOOR AIR AND SOIL VAPOR SAMPLING

The two primary Site related chlorinated solvents detected in shallow groundwater emanating from the Site are PCE and TCE. Indoor air and soil vapor sampling was conducted to evaluate if the VOCs detected at the Site and in groundwater downgradient from the Site are migrating into overlying residential structures via vapor intrusion with the sanitary sewer acting as a preferential pathway. The indoor air and soil vapor sampling locations are shown on Figure 2.1. Air and vapor results are presented in the following tables and figures:

Table No.	Title
4.8	Hapsite Air and Vapor VOC Results

Figure No.	Title
4.6A	PCE Concentrations in Site Vicinity Sewer Soil Vapor and Air
4.6B	PCE Concentrations in Downgradient Sewer Soil Vapor and Air

4.3.1 Indoor Air Sample Results

Seventeen indoor air samples were collected from two off-site structures (Structures 1 and 10) and analyzed for VOCs using the onsite HAPSITE. Results for the two structures are discussed separately for the evaluation the effectiveness of previous mitigation measures at these locations.

Structure 1

- PCE was detected at a concentration of 9 micrograms per cubic centimeter (ug/cm^3) in one sample collected from a storage cabinet.
- PCE and TCE were not detected in the breathing zone sample or in other samples collected throughout the structure.

Based on these concentration results, the mitigation methods utilized at this location appear to be working successfully.

Structure 10

- PCE was detected in eleven samples, with the highest concentration at 705 ug/cm^3 in Structure 10.
- TCE was detected in 10 samples, with the highest at 419 ug/cm^3.
- PCE and TCE were detected at concentrations of 59 ug/cm^3 and 28 ug/cm^3, respectively, in the initial breathing zone sample (IAS-ST10-01).

The highest concentrations of PCE (705 ug/cm^3) and TCE (419 ug/cm^3) in Structure 10 were observed in a sample collected above the sanitary sewer sealed with a Dranjer™ (air tight floor drain). Subsequently, the cap was sealed with poly sheeting and tape and retested four hours later. Following the sealing of sewer, the PCE and TCE concentrations above the Dranjer™ had decreased to 123 ug/cm^3 and 84 ug/cm^3 in Structure 10, respectively; however, concentrations in a sample from the breathing zone were essentially unchanged with PCE and TCE concentrations of 72 ug/cm^3 and 53 ug/cm^3, respectively.

Based on the indoor air results from Structure 10, the Dranjer™ sewer cap is potentially contributing to indoor air concentrations of PCE and TCE. Additional mitigation measures relating to the sewer cap and the sanitary sewer at the structure are warranted.

4.3.2 Sanitary Sewer Air and Soil Vapor Sample Results

Eighteen samples (2 sewer air and 16 soil vapor) were collected along the sanitary sewer on Bartels Place. One sewer air sample was collected upgradient of the Site on Realyea Place. Fourteen samples (6 sewer air and 8 soil vapor) were collected along the sanitary sewer downgradient of the Site along Pine Street.

- PCE was detected in 21 samples collected from the sanitary sewer air/soil vapor sample locations with the highest concentration of 173,771 ug/cm^3 immediately adjacent to the sewer exit from the lint trap;
    - this sample was collected from a Geoprobe® boring that extended deeper than the sanitary sewer bedding materials and intersected the lint trap source area materials, potentially misrepresenting the soil vapor along the sewer system;
    - the highest PCE concentration observed downgradient of the Site was detected in a storm water catch basin located on Pine Street (SA-PS08-06) with a concentration of 187 ug/cm^3; and,
    - the highest PCE concentration observed away from the lint trap and associated with the sanitary sewer hydraulically downgradient of the Site was 109 ug/cm^3 at SVG-BP07-03 along Bartels Place.
- TCE was detected in 17 samples collected with the highest concentration of 18,774 ug/cm^3 immediately adjacent to the sewer exit from the lint trap;
    - the highest TCE concentration detected away from the lint trap was 250 ug/cm^3 at the upgradient sewer sample from the manhole on Realyea Place, suggesting an off-site source is contributing to TCE concentrations in the sanitary sewer.

The highest PCE soil vapor concentration along the sanitary sewer (SVG-BP07-03) was observed to be a small isolated area as samples immediately upgradient (SVG-BP16-03) and downgradient (SVG-BP17-03) were both non-detect in concentration. This location was associated with a potential lateral connection to an adjacent structure identified during the closed circuit television inspection of the sewer.

The bottom of the storm water catch basin (SVG-PS08-06) with the elevated PCE concentrations on Pine Street was estimated to be 6 ft bgs. During the RI, groundwater in this area was measured at approximately 7 ft bgs, on average. The PCE vapor concentrations observed in the storm sewer at this

depth are likely the result of volatilization of contaminants from groundwater migrating through the vadose zone and into the sewer piping. For the purpose of the SRI, the sanitary sewer is not contributing to the PCE concentrations observed in the storm sewer downgradient of the Site.

4.3.3 Extent of Soil Vapor Contamination Along Sanitary Sewer

In general, soil vapor concentrations were highest immediately adjacent to the Site where the sanitary sewer exited the lint trap and decreased downgradient of the Site. The soil vapor results adjacent to the Site are believed to be the result of the borings intersecting the lint trap source materials at a depth greater than 7 ft bgs and are unrelated to the sanitary sewer bedding materials. Based on the sewer soil vapor and air results for PCE and TCE, the sanitary sewer does not currently appear to be acting as a preferential migration pathway for Site contaminants as soil vapor through the bedding materials and/or inside the sewer pipe.

The indoor air concentrations from Structures 10 indicate a potential entry point for vapor from the sanitary sewer based on the pre/post-cap sealing. However the sanitary sewer soil vapor concentrations, do not indicate a source area continuing to feed these indoor air concentrations. Further investigation into the sanitary sewer lateral and soil vapor between the sewer and the property may be warranted.

5.0 CONTAMINANT FATE AND TRANSPORT

This section presents an assessment of contaminant movement and disposition within the environment.

5.1 CONCEPTUAL SITE MODEL UPDATE

A CSM for the Site was first presented in the FAP (MACTEC, 2012) and updated with the RI. No significant revisions were required to the CSM presented in the RI based on the SRI data.

Based on detected concentrations, PCE may be present at the Site as a DNAPL (detected in the vicinity of the lint trap in soil at 21,000 mg/kg and in groundwater at 170,000 µg/l). PCE and its breakdown products have migrated from waste disposal areas (lint trap and debris piles) into soil and overburden groundwater, and then into the bedrock groundwater. Site related contaminants have been detected at concentrations above applicable SCGs in overburden and bedrock groundwater at and downgradient of the Site. Further discussion can be found in Section 5 of the RI Report. The following sections provide relevant updated information for the CSM.

5.1.1 Contaminants of Concern

The primary Site-related COCs are PCE and its breakdown products (TCE, cis-1,2- DCE, VC). PCE has historically been used at the Site for dry cleaning operations, its use was purportedly discontinued in the 1980's. 1,1,1-TCA and its breakdown product 1,1-dichloroethane have also been detected on Site; however based on data collected in the SRI the source of 1,1,1-TCA appears to be the result of an upgradient source.

During the RI, 1,1,1-TCA was primarily detected in groundwater upgradient from identified Site-related COC source areas along the southern and eastern edge of the Site. 1,1,1-TCA was not detected in samples collected during the RI from upgradient wells (MW-26 and MW-26B) on Centre Avenue. SRI sample results indicated that 1,1,1-TCA concentrations were highest (910 µg/l) at monitoring well MW-505 located in the sidewalk on Relyea Place and generally decreased hydraulically downgradient across the Site (570 µg/l to not-detected). This location is immediately upgradient of the Site and downgradient of current and former industrial facilities located on Relyea Place. The decreasing concentration of

1,1,1-TCA from off-site hydraulically upgradient to across the Site and the lack of an identified 1,1,1-TCA source area in the RI report suggest an upgradient source for 1,1,1-TCA detections on the Site.

5.1.2 Source Areas and Points of Entry

Site Building

Low level site related contaminants were detected in the vicinity of the former dry-cleaning machine, recently identified by the Site Owner. However, soil and groundwater results do not suggest that there is an additional source of contamination in this area.

MNR Property

PCE contamination is present in surface soil along the MNR tracks exceeding the Protection of Groundwater SCO in 5 of 9 locations, and was detected as high as 14 mg/kg. Migration of contaminants through precipitation (both infiltration and erosion of soil with overland flow) likely mobilized the surficial contamination in the debris piles. PCE is present in subsurface soils above the water table (approximately seven ft bgs) at a concentrations as high as 2.6 mg/kg (SS-301). Based upon the SRI results the vertical and lateral extent of contaminated soils on the MNR property has been delineated.

In general the contaminant concentrations observed in groundwater on the MNR are consistent with the RI results. PCE was detected above GA standard in both groundwater samples at a concentration as high as 500 µg/l. The observed contaminants on the MNR property generally correspond with the surface disposal areas (western debris pile, northwestern debris pile and along the MNR tracks (Figure 4.1)).

Sanitary Sewer Bedding Material

PCE contamination was not observed exceeding the Protection of Groundwater SCO in the two soil samples collected adjacent to the sanitary sewer bedding materials in the vicinity of the lint trap. These samples were collected at a depth of 2 to 3 ft bgs which are consistent with the depth of the bottom of the pipe at 2 ft bgs in this area. Deeper samples in the same borings did detect PCE above SCOs, however these results are likely related to the downward migration of contaminants from the lint trap rather than from the sanitary sewer bedding materials.

The bedding materials of the sanitary sewer in the vicinity of the lint trap are not considered a contributing source area for contaminants.

5.2 CONTAMINANT MIGRATION

Based on the results from the RI the sewer line in the vicinity of the site was identified as a potential migration pathway for soil vapor originating from contaminated Site soil and groundwater. Potential migration pathways included both the bedding materials and transport within the sewer pipe. Based on the SRI soil vapor results for PCE and TCE, the sanitary sewer does not appear to be acting as a preferential migration pathway for Site contaminants through either the bedding materials or through the pipe. Concentrations were generally observed to be low or non-detected within and around the pipe, and the higher concentrations were observed to be isolated point samples. No concentration trends were observed downgradient of the Site to suggest that this is a preferential pathway.

Based on the sewer vapor results for PCE and TCE, the storm water sewer system downgradient of Site may be acting as migration pathway for Site contaminants in vapor volatilizing from groundwater.

The indoor air results for PCE and TCE from Structure 10 suggest that vapors are entering the structure through the sewer line. However, it is unclear how the contaminants are migrating from the onsite source areas.

6.0 QUALITATIVE EXPOSURE ASSESSMENT

6.1 INTRODUCTION

A Qualitative Exposure Assessment for soil, groundwater and soil vapor at the Site was presented in the RI Report. The Qualitative Exposure Assessment was performed in accordance with NYSDEC DER-10 Technical Guidance (NYSDEC, 2010), which indicates that the assessment should evaluate the mechanisms or exposure pathways by which humans and the environment may be potentially exposed to contamination associated with the Site. Based on the data generated during the SRI there are no changes to the soil and groundwater pathways. The soil vapor pathway is modified as follows:

6.2 SANITARY AND STORM SEWER LINE VAPOR INTRUSION

One identified source area at the Site (lint trap) is directly connected to the Westchester County sanitary sewer line. Vapor sample results from samples collected during the RI from two residential sanitary sewer cleanouts hydraulically downgradient from the Site, suggested that the sanitary sewer line may be acting as a transport mechanism for contaminated vapor to enter residential dwellings.

Based on the soil vapor results collected during the SRI, the sanitary sewer does not currently appear to be acting as a preferential migration pathway for Site contaminants through either the bedding materials or through the pipe as soil vapor. Vapor results from the vicinity of the sanitary sewer cleanout in one structure suggest that the lateral into that structure may be acting as a transport mechanism for contaminated vapor. These vapors are not sufficiently found in the sanitary sewer or in an adjacent structure and could be originating from between the sewer line and the residential structure. Further delineation along the lateral may be warranted to determine the transport mechanism for vapors entering the lateral and into the residential structure.

Based on the soil vapor results collected during the SRI suggest that contaminants may be volatizing from groundwater and migrating in the vapor phase through the downgradient storm water.

Direct inhalation of contaminated vapors in the sanitary sewer near the Site and in the storm water sewer downgradient of the Site is a complete pathway for Westchester County Department of Environmental Facilities employees entering the subgrade sewer system for routine maintenance or cleaning.

7.0 SUMMARY AND CONCLUSIONS

7.1 SUMMARY

The Site is located at 10 Bartels Place in New Rochelle, Westchester County, New York (Figure 1.1). It is 0.42 acres in size and resides on a slightly sloping irregular shaped parcel. The main Site feature includes a six-sided building which occupies the majority of the property and a small parking area located to the south and southwest of the building. The surrounding area is urban with a mix of commercial and residential structures.

The Site began operations in 1950 as a uniform and industrial clothing cleaning facility for heavily soiled clothing from auto body and gasoline dispensing businesses. In 1980, Workingman's Closet, a direct factory sales division of Industrial Overall which sells new and reclaimed work clothes, was opened. The Site reportedly operated as a dry cleaning laundering facility for a short time during the 1980's. Current operations at the Site include, laundering linens and uniforms for restaurant and other businesses and retail uniform sales.

The SRI field investigation was completed at the Site in October 2015, and consisted of:

- Soil sampling (surface and subsurface), both on the Site and on the MNR property;
- Monitoring well installation;
- Groundwater sampling and groundwater elevation measurements from monitoring wells;
- Indoor air sampling from two residential structures located in the vicinity of the Site; and,
- Soil vapor sampling along and inside the sanitary sewer in the vicinity and downgradient of Site.

7.2 CONCLUSIONS

Results of this investigation indicates:

- The former dry-cleaning machine location, newly identified by the Site owner, is not an additional source of contamination to soil and shallow groundwater in this area of the Site;
- The source of 1,1,1-TCA in groundwater appears to be the result of an upgradient source;

- The observed contaminants on the MNR property generally correspond with the surface disposal areas (western debris pile, northwestern debris pile and along the MNR tracks),and the extent of the soil contamination has be vertically and laterally delineated;
- No soil contamination was observed in the sanitary sewer bedding materials in the vicinity of the lint trap source area.
- The sanitary sewer line is not acting as a preferential pathway for contaminants originating at the lint trap to migrate and enter into nearby structures as soil vapor.
- Volatilization of contaminants from groundwater into the storm water sewer pipe downgradient of the Site may be occurring.
- The Qualitative Exposure Assessment indicated ecological receptors are not present; however; completed exposure pathways exist for:
    - Soil vapor entering residential structures in the vicinity of the Site.
    - If sub-surface work were to occur in the vicinity of the identified contaminated soil, groundwater or soil vapor, direct exposure could occur.

7.3 SRI DATA GAPS

A review of the data generated during the SRI identified the following data gaps:

- The source of and migration pathway for contaminated vapors entering a residential structure through the sanitary sewer line should be investigated.

7.4 RECOMMENDATIONS

The draft RI and FS reports should be updated based on the results of this investigation. Additionally, based on the findings of the SRI MACTEC recommends that a pre-design investigation be conducted to address the data gap concerning soil vapor infiltration through the residential sanitary sewer line.

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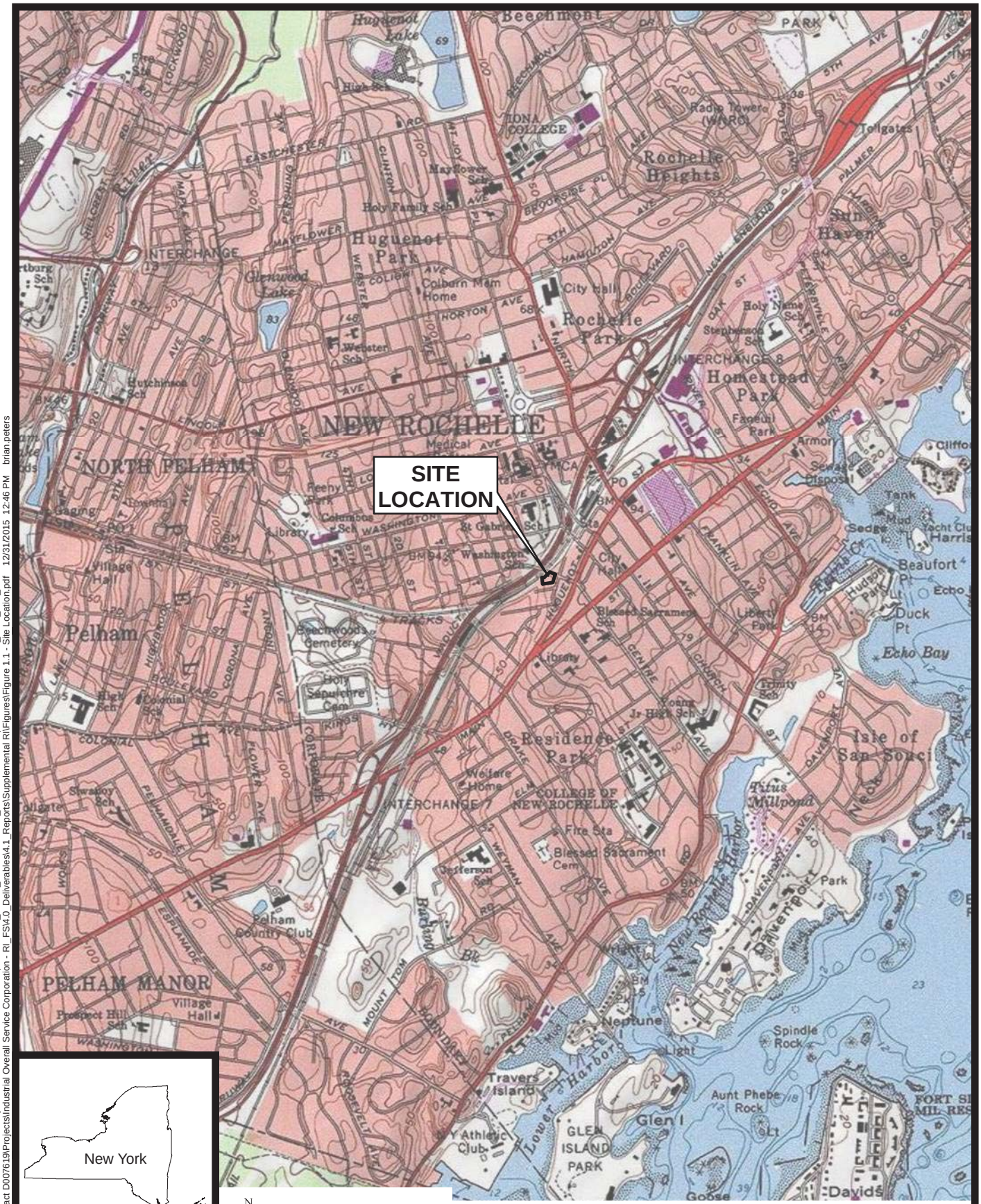
FIGURES



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SUPPLEMENTAL RI
INDUSTRIAL OVERALL SERVICES
NEW ROCHELLE, NEW YORK

MACTEC

SITE LOCATION

Project 3612112221 Figure 1.1

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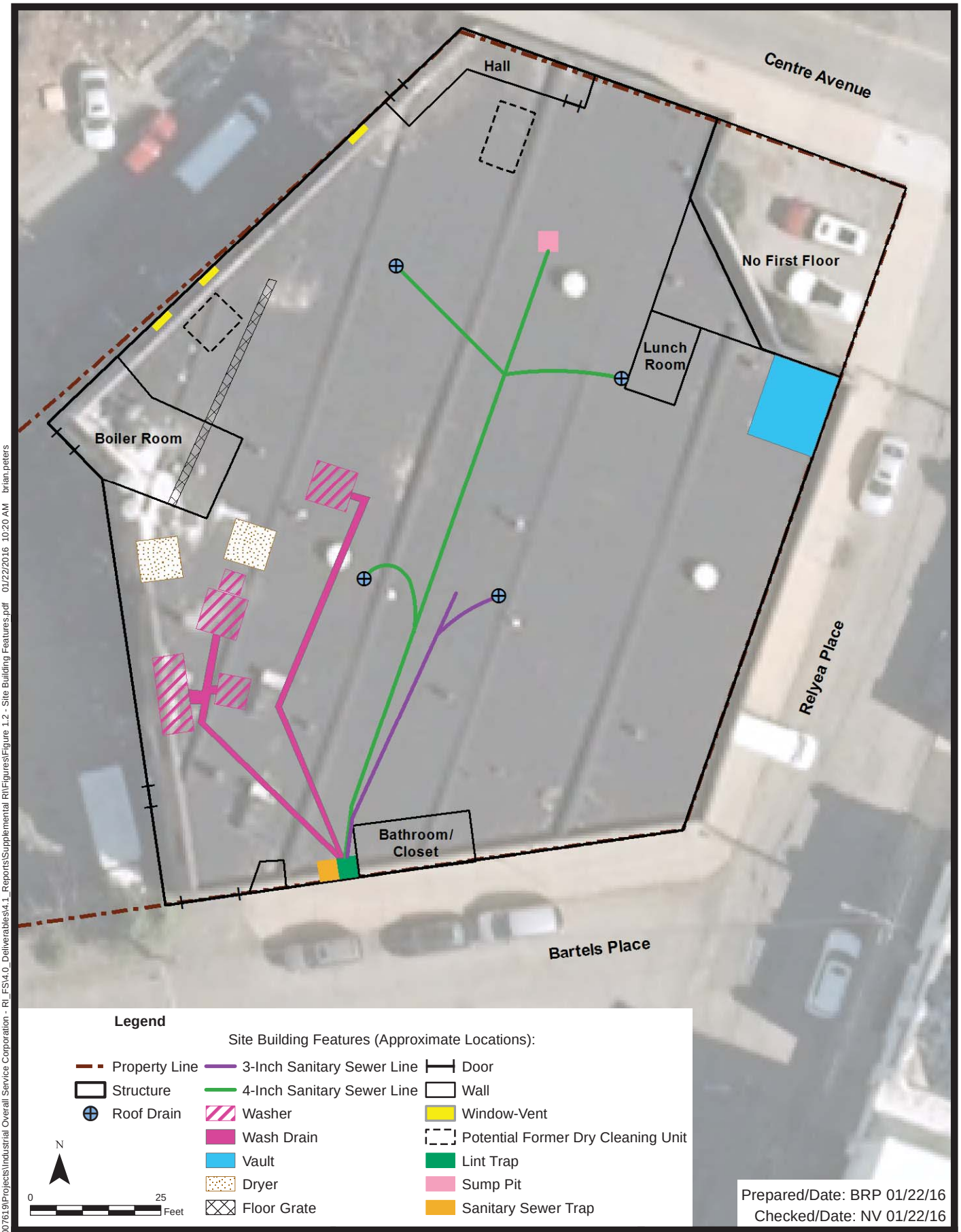

SUPPLEMENTAL RI
INDUSTRIAL OVERALL SERVICES
NEW ROCHELLE, NEW YORK

MACTEC

SITE BUILDING FEATURES

Project 3612112221 Figure 1.2

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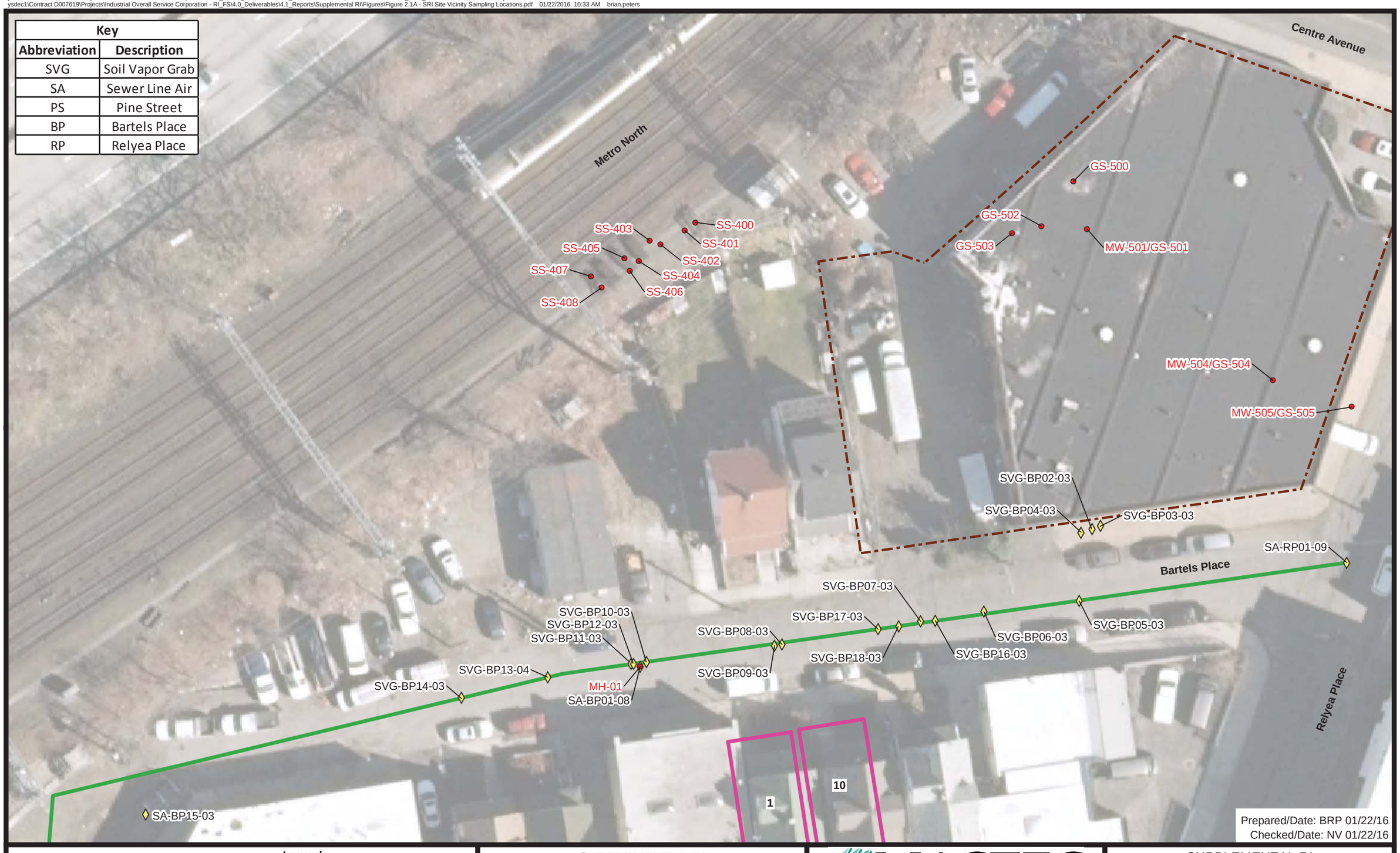
Key	
Abbreviation	**Description**
SVG	Soil Vapor Grab
SA	Sewer Line Air
PS	Pine Street
BP	Bartels Place
RP	Relyea Place



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N
0 15 30 Feet

Legend

Sewer Vapor Location
Surveyed Location
Sanitary Sewer
Property Line

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SUPPLEMENTAL RI
SITE VICINITY SAMPLING LOCATIONS
Project 3612112221 Figure 2.1A

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SUPPLEMENTAL RI
DOWNGRADIENT SAMPLING LOCATIONS
Project 3612112221 Figure 2.1B

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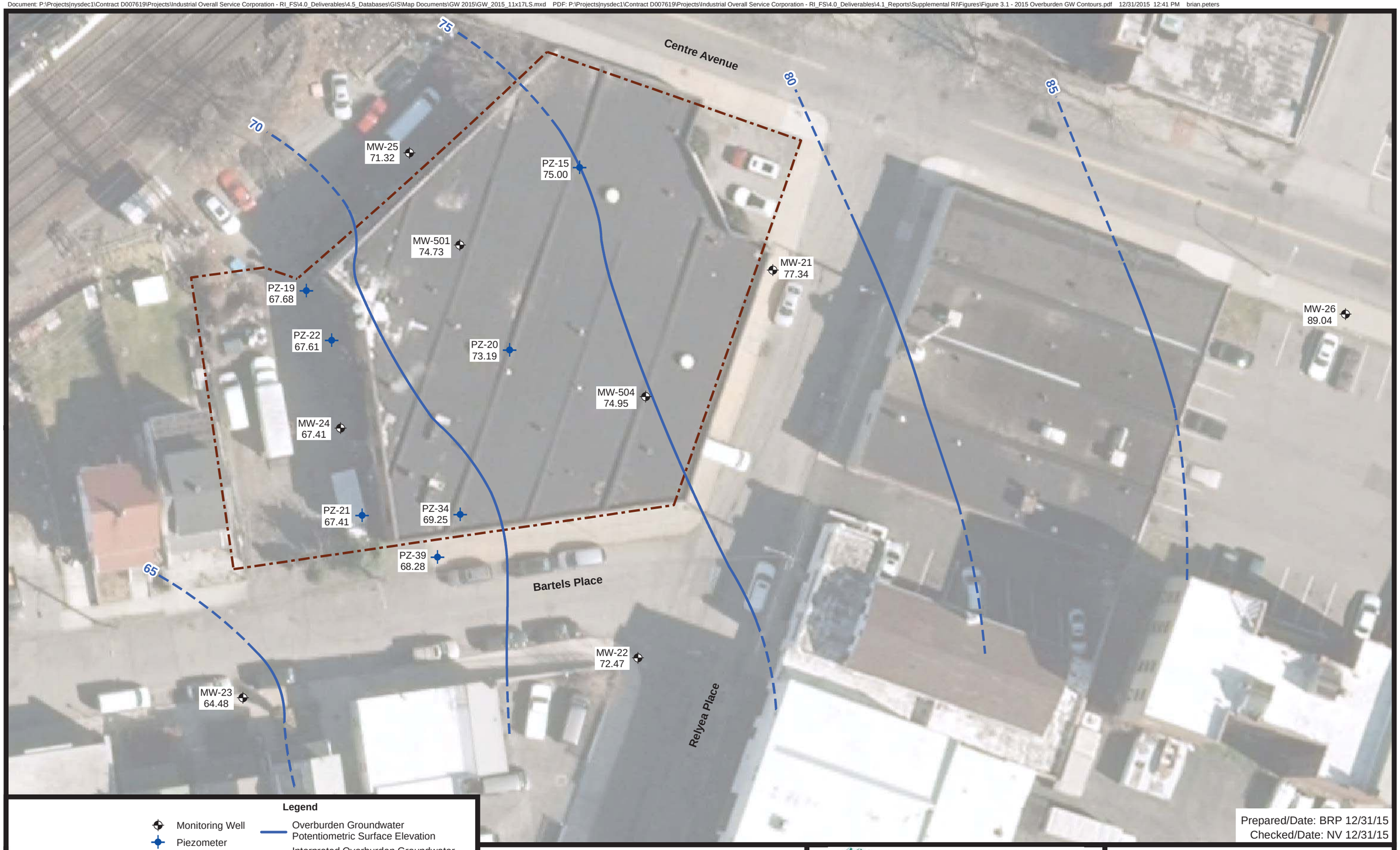

Legend

- Monitoring Well
- Piezometer
- Property Line
- Overburden Groundwater Potentiometric Surface Elevation
- Interpreted Overburden Groundwater Potentiometric Surface Elevation
- 90 Groundwater Elevation Shown in Feet Above Mean Sea Level

N

0 15 30 Feet

Prepared/Date: BRP 12/31/15
Checked/Date: NV 12/31/15

SUPPLEMENTAL RI
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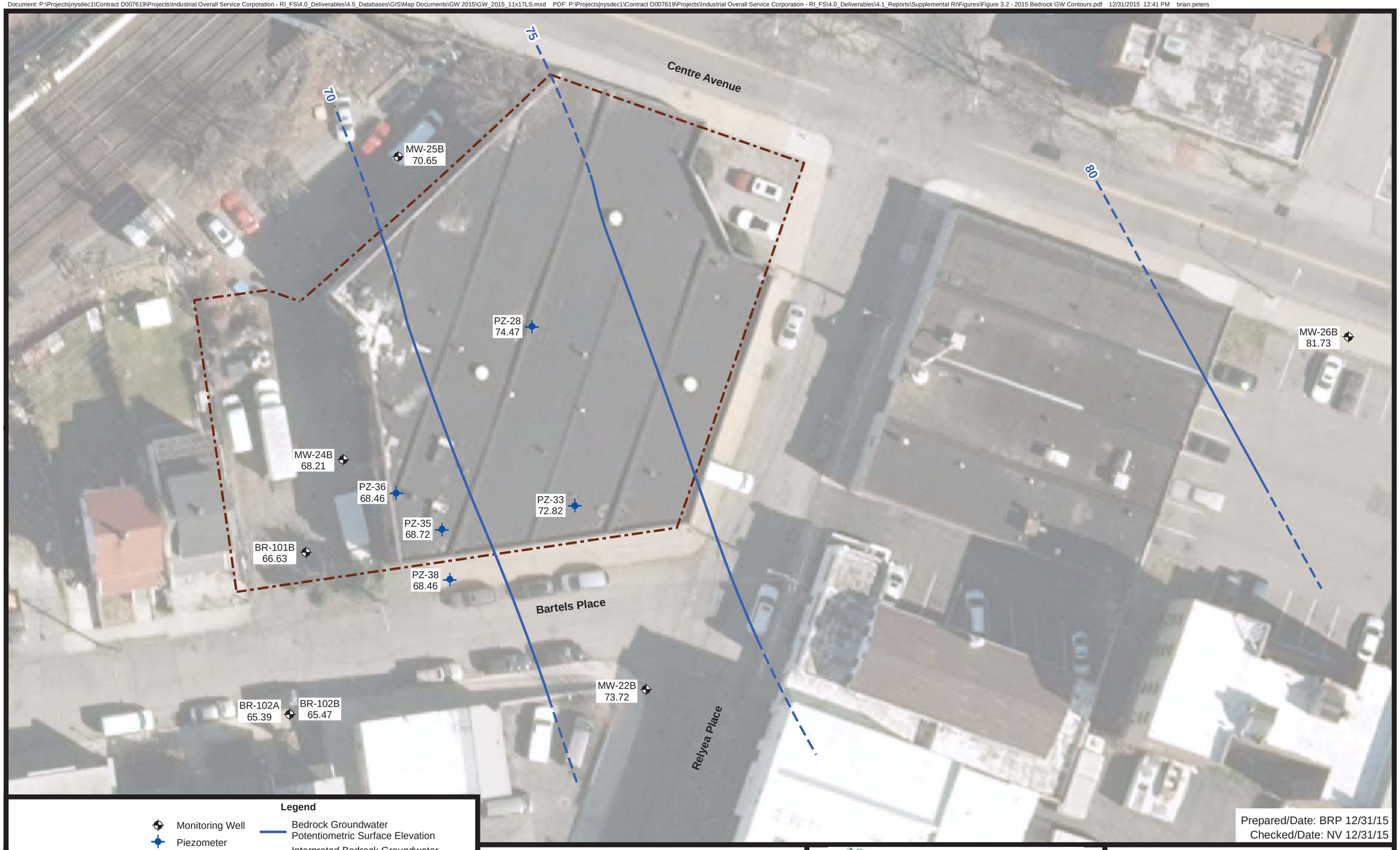
OCTOBER 2015 OVERBURDEN
GROUNDWATER CONTOURS
Project 3612112221 Figure 3.1



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OCTOBER 2015 BEDROCK
GROUNDWATER CONTOURS
Project 3612112221 Figure 3.2

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Metro North Railroad

Centre Avenue

Relyea Place

Bartels Place

Northwest Debris Pile and Railroad Tracks

Parking Lot Metro North Railroad Property

Western Debris Pile

Parking Lot Site

Site Building

Sump Pit (SP-001)

Vault (SP-005)

Lint Trap (SP-003)

PZ-29 SS-210 SS-208 SS-216 E-1 F-1 G-1 H-1 SS-211 D-1 SS-215 E-2 GS-32 C-1 SS-214 D-2 F-2 G-2 GS-31 C-2A B-2 B-2A C-2 SS-212 GS-15 GS-3 PZ-23 MW-29B GS-30 SS-213 D-3 F-3 B-3 C-3 E-3 A-3 SS-217 GS-7 GS-1 GS-500 SS-305 C-3A SS-304 SS-300 SS-209 D-4 GS-25 SS-400 SS-301 SS-401 SS-302 ESS-1 ESW-2 GS-18 C-4 GS-17 GS-503 GS-502 GS-501 SS-403 SS-303 ESW-1A SS-204 SS-101 GS-8 SS-402 SS-205 ESB-3 SS-200 SS-405 SS-404 ESB-1 ESW-1 SS-202 GS-29 GS-2 GS-16 SS-407 SS-107 SS-105 SS-102 SS-201 D-6 PZ-19 SS-406 SS-206 ESW-3 PZ-28 SS-106 SS-207 ESB-2 C-5 SS-203 SS-408 SD-2 ESW-5 E-5 SS-100 ESW-4 PZ-22 SS-104 MW-30B PZ-20 GS-6 D-5 SS-108 C-6 SS-103 GS-9 GS-26 GS-504 GS-5 GS-27 D-7 C-7 GS-4 GS-505 MW-24B C-8 D-8 E-8 PZ-36 GS-37 PZ-33 GS-10 PZ-35 PZ-34 E-9 PZ-21 SP-3 GS-508 D-9 BR-101 C-9 GS-506 GS-507 PZ-38 GS-40 SD-1 MH-001 BR-102

Legend

Circle Color Indicates PCE Result:

- < 1.3 mg/kg
- 1.3 - 5.5 mg/kg (Protection of Groundwater SCO)
- 5.5 - 150 mg/kg (Residential SCO)
- >= 150 mg/kg (Commercial SCO)
- No sample collected from sampling interval

Circle Size Indicates Soil Collected from Depths:

- Less than 2 feet bgs
- Ranging from 2 to 4 feet bgs
- Ranging from 4 to 6 feet bgs
- Greater than 6 feet bgs

- Structure
- Property Line

Areas of Concern (AOCs):

- Site
- Residential Use Property
- Metro North Railroad Property
- MNR Debris Pile/Parking Lot Boundary
- Western Debris Pile

Notes:
Results shown in milligrams per kilogram (mg/kg)
Results from 2012-2015 Remedial Investigation and 2015 Supplemental Remedial Investigation
PCE = Tetrachloroethene
SS/GS = Soil boring sample location
SB = Soil sample collected in monitoring well boring (MW-24B)
bgs = below ground surface
SCO = Remedial Soil Cleanup Objectives - 6 NYCRR Subpart 375-6 (NYS, 2006).

N

0 15 Feet

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Checked/Date: NV 12/31/15

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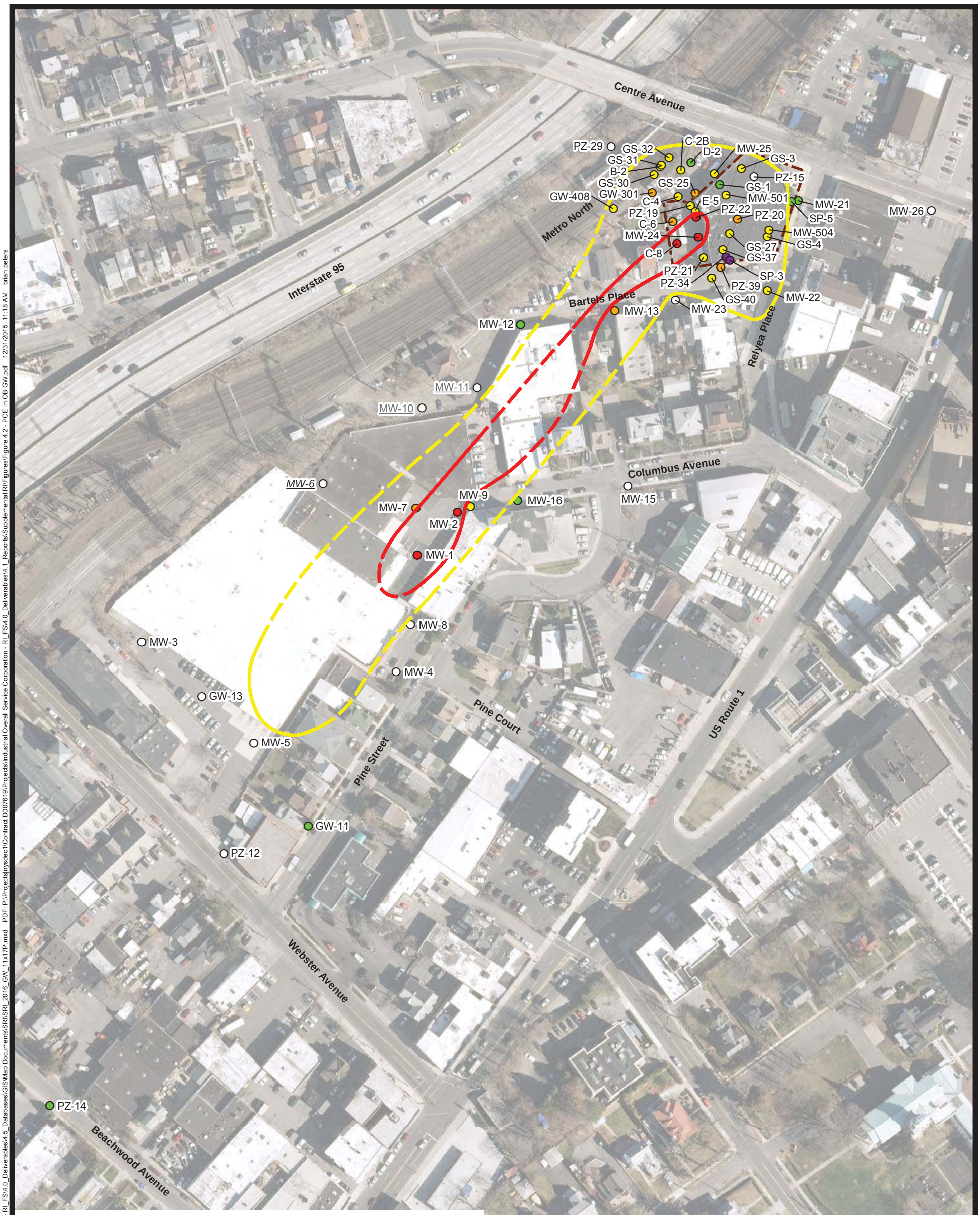
RI & SRI PCE SOIL RESULTS

Project 3612122256 Figure 4.1



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RI & SRI PCE CONCENTRATIONS IN
OVERBURDEN GROUNDWATER
Project 3612112221 Figure 4.2

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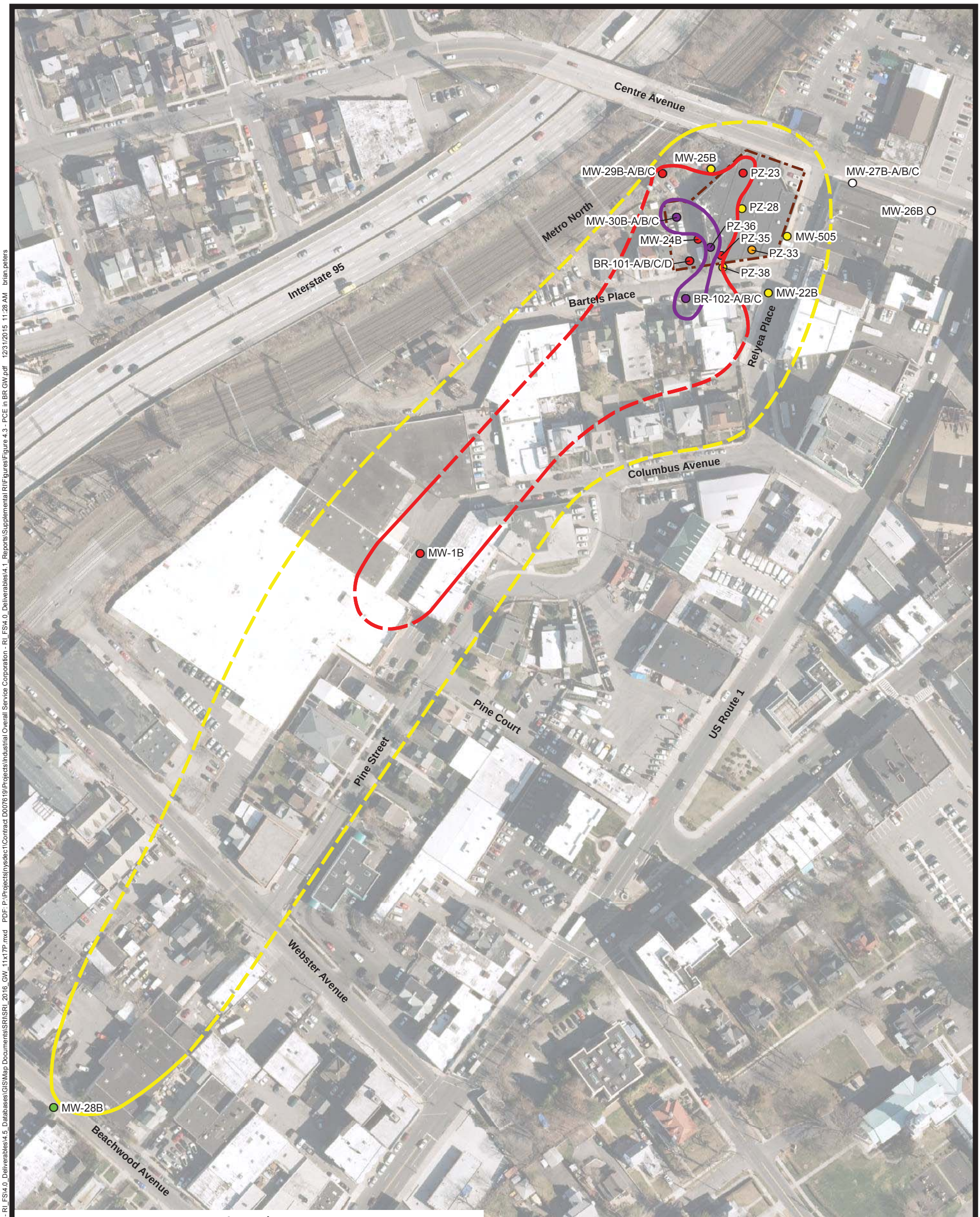

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RI & SRI PCE CONCENTRATIONS IN BEDROCK GROUNDWATER
Project 3612112221 Figure 4.3

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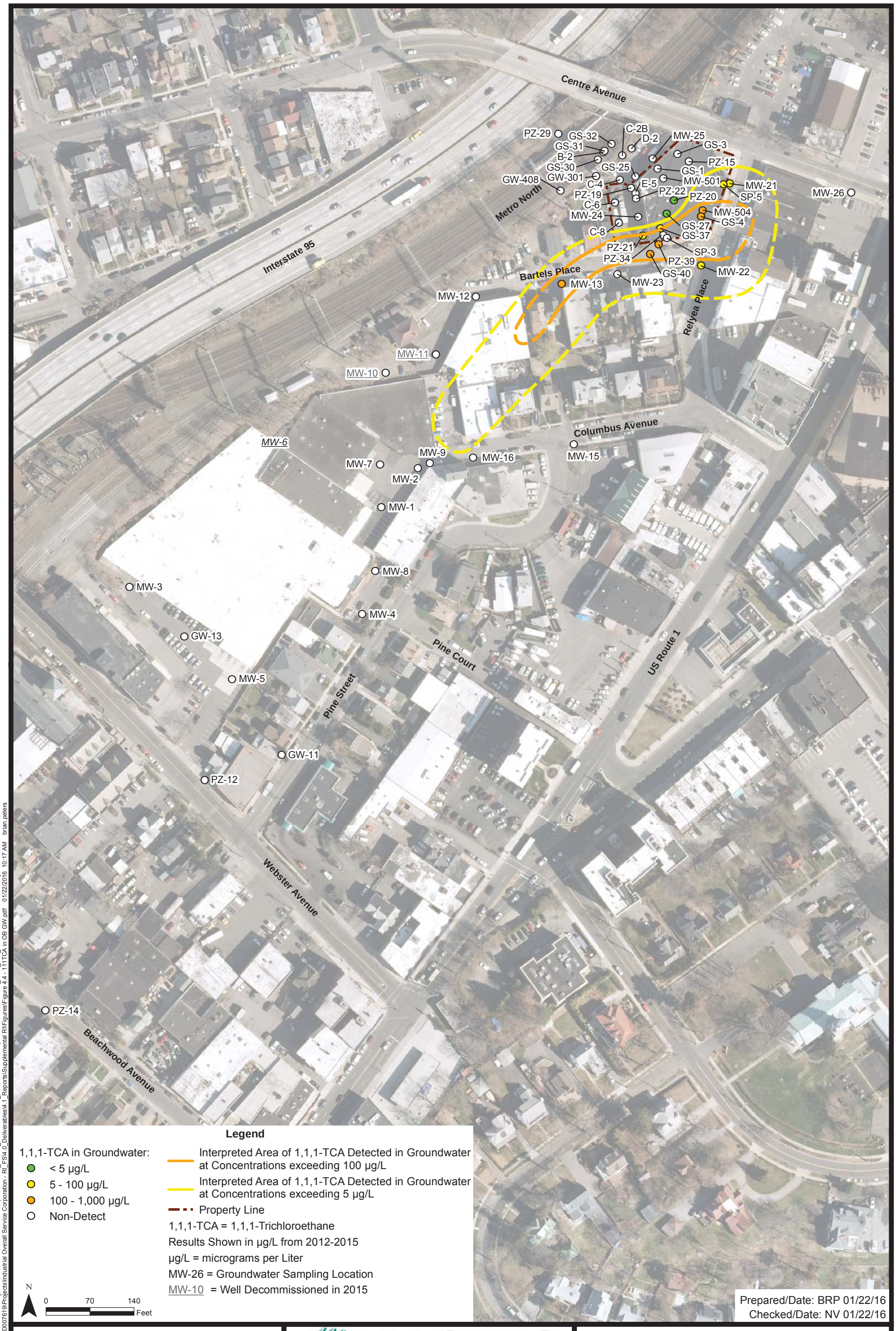

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RI & SRI 1,1,1-TCA CONCENTRATIONS IN OVERBURDEN GROUNDWATER
Project 3612112221 Figure 4.4

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RI & SRI 1,1,1-TCA CONCENTRATIONS IN BEDROCK GROUNDWATER
Project 3612112221 Figure 4.5

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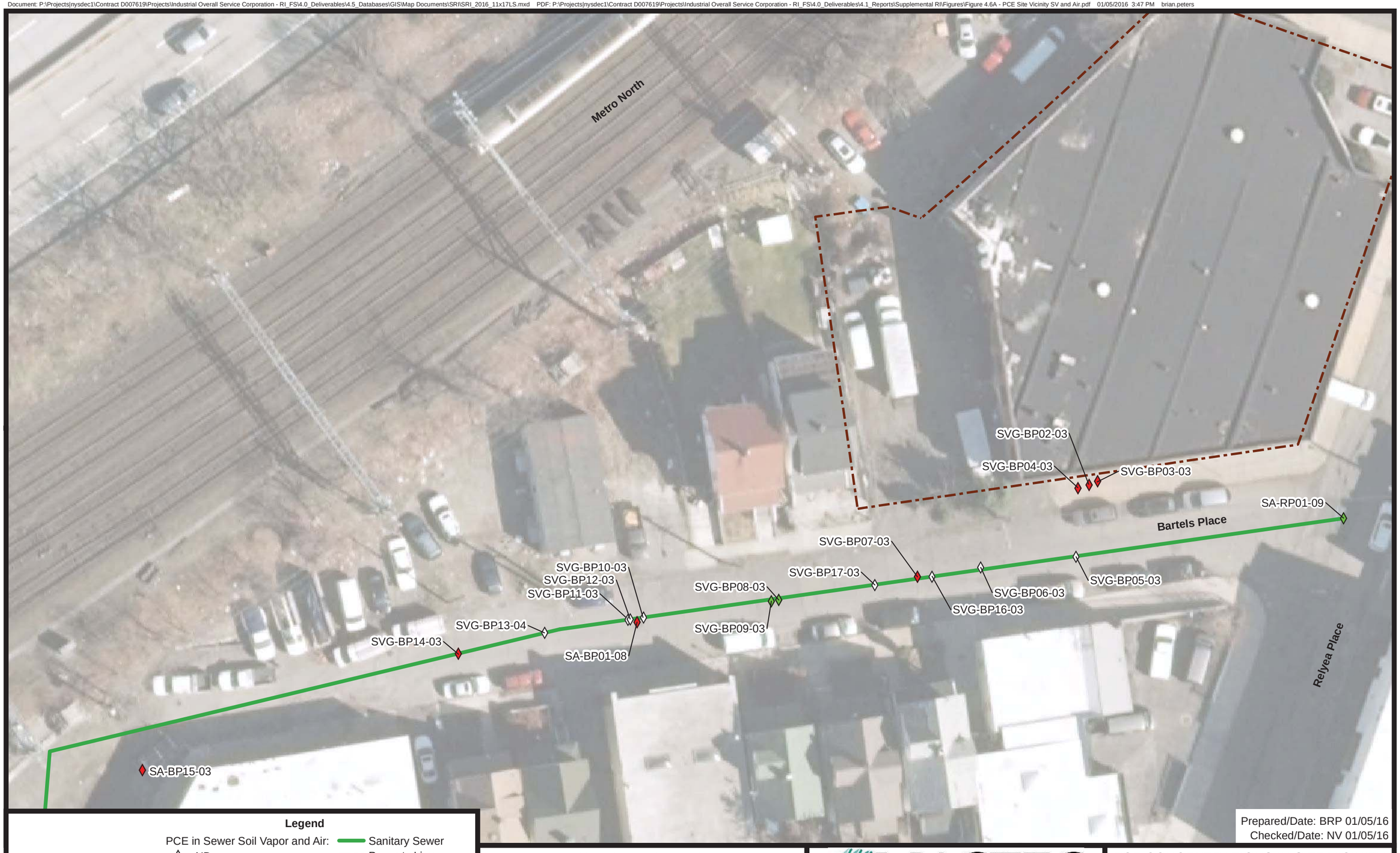

Legend

PCE in Sewer Soil Vapor and Air:
- ND
- < 30 ug/m3
- > 30 ug/m3

- Sanitary Sewer
- Property Line

N

0 15 30 Feet

Prepared/Date: BRP 01/05/16
Checked/Date: NV 01/05/16

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PCE CONCENTRATIONS IN SITE VICINITY
SEWER SOIL VAPOR AND AIR
Project 3612112221 Figure 4.6A

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PCE CONCENTRATIONS IN DOWNGRADIENT SEWER SOIL VAPOR AND AIR
Project 3612112221 Figure 4.6B

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TABLES

Table 2.1: Summary of SRI Field Investigation Activities

Activity	Date	Activity Sample Location	Rationale	Paramters Analyzed	Relevant Appendix/Reference
MetroNorth Property Data Gap					
Direct Push Soil Borings	October 22, 2015	SS-301, SS-400 through SS-408	To evaluate the extent of soil contamination along the MNR tracks.	VOCs and % moisture	Appendix B.4
Direct Push Direct Push Groundwater Grab Sampling	October 22, 2015	GW-301 and GW-408	To evaluate if contaminants are migrating to groundwater from this area.	VOCs	Appendix B.3
Site Building Data Gap					
Subsurface Soil Sampling During Monitoring Well Installation	October 17, 2015	GS-501	To evaluate potential contamination in soil in the vicinity of the former dry-cleaning machine which was recently identified by the Site Owner.	VOCs and % moisture	Appendix B.1
	October 18, 2015	GS-504 and GS-505	To evaluate a potential source of 1,1,1-TCA upgradient (north) of the lint trap.		
Hand Probe Soil Sampling	October 17-26, 2015	GS-502, GS-503	To evaluate potential contamination in soil in the vicinity of the former dry-cleaning machine which was recently identified by the Site Owner.		
Groundwater Monitoring Well Installation and Development	October 17-19, 2015	MW-501	To evaluate potential contamination in shallow groundwater in the vicinity of the former dry-cleaning machine which was recently identified by the Site Owner.	NA	Appendix B.2
	October 18-26, 2015	MW-504 and MW-505	To evaluate a potential source of 1,1,1-TCA upgradient (north) of the lint trap.		
Monitoring Well Groundwater Sampling	October 27, 2015	MW-501	To evaluate potential contamination in shallow groundwater in the vicinity of the former dry-cleaning machine which was recently identified by the Site Owner.	VOCs	Appendix B.3
	October 27, 2015	MW-504 and MW-505	To evaluate a potential source of 1,1,1-TCA upgradient (north) of the lint trap.	VOCs	Appendix B.3
	October 17-19, 2015	PZ-22, PZ-33, PZ-34, and PZ-35	Current groundwater concentrations for comparison of results from new wells	VOCS	Appendix B.3
Synoptic Groundwater Elevation Survey (from select monitoring wells in the vicinty of the Site)	October 26, 2015	MW-21, MW-22, MW-22B, MW-23, MW-24, MW-24B, MW-25, MW-25B, MW-26, MW-26B, MW-28B, BR-101A (1,2), BR-101B (3,4), BR-101C (5,6), BR-101D (7), BR-102A (1,2), BR-102B (3,4), BR-102C (5,6,7), PZ-15, PZ-19, PZ-20, PZ-21, PZ-22, PZ-23, PZ-28, PZ-33, PZ-34, PZ-35, PZ-36, PZ-38, PZ-39, MW-501, MW-504, MW-505	To evaluate groundwater flow and contaminant distribution in the vicinity of the Site with the addition of the SRI wells	NA	Table 2.3

Table 2.1: Summary of SRI Field Investigation Activities

Activity	Date	Activity Sample Location	Rationale	Paramters Analyzed	Relevant Appendix/Reference
Sewer Line Data Gap					
Private Utility Locator	October 20-21, 2015	Bartels Place and Pine St	To locate the center and depth of the sanitary sewer for the grab soil vapor sampling on Bartels Place and Pine Street	NA	NA
Direct Push Soil Borings	October 21, 2015	GS-506, GS-507, GS-508	To evaluate soil contamination adjacent to the sewer line in the vicinity of the lint trap which could be a continuing source contamination to groundwater and soil vapor which is migrating from the Site.	VOCs and % moisture	Appendix B.1
Exterial Soil Vapor Grab Sampling	October 26-28, 2015	Bartels Place, Pine St, and Realyea Place	To evaluate the extent of PCE migration as soil vapor along sewer line (a potential preferential pathway) along Bartels Place and Pine Street, both inside the pipe and in the bedding materials surrounding the sewer pipe.	VOCs	Appendix B.4
Indoor Air Sampling	October 27, 2015	Structure 1 and Structure 10	To evaluate the extent of PCE migration into nearby structures via the sanitary sewer and to evaluate previously implemented mitigation measures.	VOCs	Table 4.13
Investigation Derived Waste Management					
IDW Transport and Disposal	October 29, 2015	Site Building and MNR Property	Management of waste generated during the SRI.	NA	Appendix C
Elevation Surveys					
Site Survey	October 26, 2015	SRI Locations	To aid in interpreting groundwater flow direction and producing a Tecplot 3D model.	NA	Appendix D

Notes:

BR = Bedrock
GS = Geoprobe soil sample
GW = groundwater
MW = monitoring well
PZ = piezometer sample
SA = sewer air sample
SS = surface soil sample
SVG = exterior soil vapor grab sample

BP = Bartels Place
MNR = Metro North Railroad
PS = Pine Street
RP = Realyea Place
SRI = Supplemental Remedial Investigation
NA = not applicable
IDW = investigation derived waste
VOCs = volatile organic compounds

PCE = Tetrachloroethene
1,1,1-TCA = 1,1,1-Trichloroethane

Table 1: Proposed Sample Methodology, Rationale, Identification, and Analytical Schedule

Analysis	VOCs	VOC
Media	Soil	Water
Method	5035A/8260C	8260C
container	2X40ml	3X40ml
Preservative	methanol	HCL, 4°C
units	mg/kg (ppm)	ug/L (ppb)
Detection limit needed to meet objective	0.05 (1)	0.5 (1)
Validation Level	Cat A	

Evaluation Objectives	Methodology	Loc I.D.	Media	Sample I.D.	Sample Rational	# of Samples	
MNR Data Gap To evaluate: 1) the extent of soil contamination along the RR tracks, and 2) if contaminants are migrating to groundwater from this area.	**Direct Push Soil Sampling** - Up tp ten soil borings will be advanced to a depth of approximately 12 feet. Up to three samples will be collected from each boring. Samples will be collected when there is an indication of waste (e.g. visual, PID or olfatory), if there is no indication samples will be collected at: 1- 2 feet bgs, 6-8 feet bgs and at the bottom of the boring.	SS-301	Soil	360109-SS-301___	Extent of soil contamination	1	
			Soil	360109-SS-301___	Extent of soil contamination	1	
			Soil	360109-SS-500___	Extent of soil contamination	1	
		SS-400	Soil	360109-SS-400___	Extent of soil contamination	1	
			Soil	360109-SS-400___	Extent of soil contamination	1	
			Soil	360109-SS-400___	Extent of soil contamination	1	
		SS-401	Soil	360109-SS-401___	Extent of soil contamination	1	
			Soil	360109-SS-401___	Extent of soil contamination	1	
			Soil	360109-SS-401___	Extent of soil contamination	1	
		SS-402	Soil	360109-SS-402___	Extent of soil contamination	1	
			Soil	360109-SS-402___	Extent of soil contamination	1	
			Soil	360109-SS-402___	Extent of soil contamination	1	
		SS-403	Soil	360109-SS-403___	Extent of soil contamination	1	
			Soil	360109-SS-403___	Extent of soil contamination	1	
			Soil	360109-SS-403___	Extent of soil contamination	1	
		SS-404	Soil	360109-SS-404___	Extent of soil contamination	1	
			Soil	360109-SS-404___	Extent of soil contamination	1	
			Soil	360109-SS-404___	Extent of soil contamination	1	
		SS-405	Soil	360109-SS-405___	Extent of soil contamination	1	
			Soil	360109-SS-405___	Extent of soil contamination	1	
			Soil	360109-SS-405___	Extent of soil contamination	1	
		SS-406	Soil	360109-SS-406___	Extent of soil contamination	1	
			Soil	360109-SS-406___	Extent of soil contamination	1	
			Soil	360109-SS-406___	Extent of soil contamination	1	
		SS-407	Soil	360109-SS-407___	Extent of soil contamination	1	
			Soil	360109-SS-407___	Extent of soil contamination	1	
			Soil	360109-SS-407___	Extent of soil contamination	1	
		SS-408	Soil	360109-SS-408___	Extent of soil contamination	1	
			Soil	360109-SS-408___	Extent of soil contamination	1	
			Soil	360109-SS-408___	Extent of soil contamination	1	
	Groundwater grab samples will be collected from two soil borings.	GW-301	water	360109-GW-301__	Groundwater concentration of PCE at the location of the highest soil sample results from previous investigation.		1
		GW-408	water	360109-GW-406__	Groundwater concentration of PCE downgradient of area of known contamination.		1

Table 1: Proposed Sample Methodology, Rationale, Identification, and Analytical Schedule

					Analysis	VOCs	VOC
					Media	Soil	Water
					Method	5035A/8260C	8260C
					container	2X40ml	3X40ml
					Preservative	methanol	HCL, 4°C
					units	mg/kg (ppm)	ug/L (ppb)
					Detection limit needed to meet objective	0.05 (1)	0.5 (1)
					Validation Level	Cat A	
Evaluation Objectives	Methodology	Loc I.D.	Media	Sample I.D.	Sample Rational	# of Samples	
Building Data Gap To evaluate: 1) potential contamination in soil and shallow groundwater in the vicinity of the former dry-cleaning machine which was recently identified by the Site Owner, and; 2) a potential source of 1,1,1-TCA upgradient (north) of the lint trap.	**Direct Push Soil Sampling -** Collect direct push samples from 5 borings within Site building near potential source areas. Advance 1 boring outside of building	GS-500	Soil	360109-GS-500___	Potential contamination near former dry cleaner	1	
			Soil	360109-GS-500___	Potential contamination near former dry cleaner	1	
			Soil	360109-GS-500___	Potential contamination near former dry cleaner	1	
		GS-501	Soil	360109-GS-501___	Potential contamination near former dry cleaner	1	
			Soil	360109-GS-501___	Potential contamination near former dry cleaner	1	
			Soil	360109-GS-501___	Potential contamination near former dry cleaner	1	
		GS-502	Soil	360109-GS-502___	Potential contamination near former dry cleaner	1	
			Soil	360109-GS-502___	Potential contamination near former dry cleaner	1	
			Soil	360109-GS-502___	Potential contamination near former dry cleaner	1	
		GS-503	Soil	360109-GS-503___	Potential contamination near former dry cleaner	1	
			Soil	360109-GS-503___	Potential contamination near former dry cleaner	1	
			Soil	360109-GS-503___	Potential contamination near former dry cleaner	1	
		GS-504	Soil	360109-GS-504___	Evaluate potential source of 1,1,1 TCA contamination	1	
			Soil	360109-GS-504___	Evaluate potential source of 1,1,1 TCA contamination	1	
			Soil	360109-GS-504___	Evaluate potential source of 1,1,1 TCA contamination	1	
		GS-505	Soil	360109-GS-505___	Evaluate potential source of 1,1,1 TCA contamination	1	
			Soil	360109-GS-505___	Evaluate potential source of 1,1,1 TCA contamination	1	
			Soil	360109-GS-505___	Evaluate potential source of 1,1,1 TCA contamination	1	
	Low flow groundwater sampling -will be conducted at 4 existing wells and 4 newly installed wells. **Water levels will be measured in the following wells:** MW-21, MW-22, MW-22B, MW-23, MW-24, MW-24B, MW-25, MW-25B, MW-26, MW-26B, MW-28B, BR-101A (1,2), BR-101B (3,4), BR-101C (5,6), BR-101D (7), BR-102A (1,2), BR-102B (3,4), BR-102C (5,6,7), PZ-15, PZ-19, PZ-20, PZ-21, PZ-22, PZ-23, PZ-28, PZ-33, PZ-34, PZ-35, PZ-36, PZ-38, PZ-39, MW-500, MW-502, MW-504, MW-505	MW-500	water	360109-MW-500__	Evaluate potential bedrock		1
		MW-502	water	360109-MW-502__	Evaluate potential overburden groundwater contamination near the former dry cleaner.		1
		MW-504	water	360109-MW-504__	Evaluate potential source of 111 TCA in overburden groundwater.		1
		MW-505	water	360109-MW-505__	Evaluate potential source of 111 TCA in bedrock groundwater.		1
		PZ-33	water	360109-PZ-33__	Current groundwater concentrations for comparison of results from new wells		1
		PZ-34	water	360109-PZ-34__	Current groundwater concentrations for comparison to results from new wells		1
		PZ-35	water	360109-PZ-35__	Current groundwater concentrations for comparison of results from new wells		1
		PZ-22	water	360109-PZ-22__	Current groundwater concentrations for comparison of results from new wells		1

Table 1: Proposed Sample Methodology, Rationale, Identification, and Analytical Schedule

					Analysis	VOCs	VOC
					Media	Soil	Water
					Method	5035A/8260C	8260C
					container	2X40ml	3X40ml
					Preservative	methanol	HCL, 4°C
					units	mg/kg (ppm)	ug/L (ppb)
					Detection limit needed to meet objective	0.05 (1)	0.5 (1)
					Validation Level	Cat A	
Evaluation Objectives	Methodology	Loc I.D.	Media	Sample I.D.	Sample Rational	# of Samples	
Sewer Line Data Gap to evaluate: 1) soil contamination adjacent to the sewer line in the vicinity of the lint trap which could be a continuing source contamination to groundwater and soil vapor which is migrating from the Site, and; 2) the extent of PCE migration as soil vapor along sewer line (a potential preferential pathway) along Bartels Place and Pine Street, both inside the pipe and in the bedding materials surrounding the sewer pipe.	**Soil sampling- three soil samples** will be collected from the bedding matterial surounding the sewer line in the side walk adjacent to the lint trap. Samples will be collected by clearing soils (with air knife, shop vac, hand aguer, hand geoprobe) to a depth approximately 1 foot above the sewer line. Sample will be collected with either a hand auger or hand geoprobe.	HS-506	Soil	360109-HS-506__	Evaluate potential soil contamination in the vicinity of the sewer line adjacent to the lint trap.	1	
		HS-507	Soil	360109-HS-507__	Evaluate potential soil contamination in the vicinity of the sewer line adjacent to the lint trap.	1	
		HS-508	Soil	360109-HS-506__	Evaluate potential soil contamination in the vicinity of the sewer line adjacent to the lint trap.	1	

NOTES:
VOCs - volatile organic compounds
DL- Detection limit
bgs - below ground surface
DP- direct pus
Gs- geoprobe sample
XD - duplicate
MS - matrix spike
MD - matrix spike duplicate

Detection limits should be low enough to achieve the following comparisons:
* -Soil analytical results will be compared to the 6 NYCRR Part 375 Soil Cleanup Objectives for Protection of Groundwater, and Commercial Use Scenarios.
** -Water analytical results will be compared to The NYS Class GA Groundwater Quality Standards from 6 NYCRR Parts 700-705.
(1)- 0.02 ppb vinyl chloride, 1,2 dichloroethane

Data Quality Objectives vs. Detection Limits

Media	DQO	Method	EPA Method #	Standard DL	Contaminants that won't meet the DQO at standard DL
Soil	SCO Unrestricted - 6 NYCRR Part 375	VOC	5035A/8260C	0.05 ppm	0.02 vinyl chloride, 1,2 dichloroethane
Sediment	SGV - NYSDEC Screening and Assesment of Contaminated Sediment. June 24, 2014	VOC	5035A/8260C	0.05 ppb	
Groundwater	Class GA - Groundwater Quality Standards from 6 NYCRR Parts 700-705	VOC	8260C	0.5 ppb	
Surface Water	Surface Water Quality Standards from 6 NYCRR Parts 700-705	VOC	8260C	0.05 ppb	

Table 2.2: Summary of Monitoring Well Construction and Elevation Data

Location ID	Northing	Easting	Ground Elevation (ft msl)	Casing Elevation (ft msl)	Riser Elevation (ft msl)	Depth to Bedrock (ft bgs)	Bedrock Surface Elevation (ft msl)	Screening Interval (ft bgs)	Well Type	Boring Depth (ft bgs)
MW-1	756093.4	688953.9	55.17	55.17	54.92	>14	<41.2	5-14	OB	14
MW-1B	756096.4	688958.3	55.04	55.04	54.76	22	33	32.5-42.5	BR	45
MW-2	756155.4	689012.1	57.74	57.74	57.36	>17	<40.7	8-17	OB	17
MW-3	755966.4	688553.5	59.36	59.36	59.43	7.5	52.0	4-12	OB/BR	12
MW-4	755923.6	688923.4	54.67	54.67	54.21	>19	<36.7	9-19	OB	19
MW-5	755820.1	688716.4	53.62	53.62	53.24	>18	<35.5	8-18	OB	18
MW-7	756161.6	688952.1	55.20	55.20	54.99	>14	<41.2	5-14	OB	14
MW-8	755992.4	688944.1	55.69	55.69	55.27	>14	<41.7	4-14	OB	14
MW-9	756164.1	689030.9	58.54	58.54	58.15	>16	<42.5	6-14	OB	16
MW-10	756307.5	688960.6	65.70	65.70	65.45	10.4	55.3	5-10	OB	12.2
MW-11	756336.5	689040.8	65.02	65.02	64.72	>20	<47.6	8-18	OB	20
MW-12	756428.6	689104.1	62.59	62.59	62.37	>15	<44	3.5-13.5	OB	15
MW-13	756448.8	689240.6	66.31	66.31	65.89	>15	<51.3	5-15	OB	15
MW-15	756194.0	689260.0	69.31	69.31	69.11	19.8	49.5	6.8-16.3	OB	24
MW-16	756172.9	689099.9	60.13	60.13	59.78	>16.3	<43.8	5.1-14.6	OB	16.3
MW-21	756608.5	689508.1	88.50	88.50	88.04	20	68.5	12.4-22.4	OB	24
MW-22	756477.6	689462.5	83.64	83.64	83.46	14.5	69.1	13.4-22.8	OB/BR	22.8
MW-22B	756474.7	689464.2	84.02	84.02	83.54	17	67	30-40	BR	45
MW-23	756464.3	689329.3	72.69	72.69	72.45	>20	<52.7	8.9-18.9	OB	20
MW-24	756555.1	689362.3	76.25	76.25	76.12	>25	<51.3	14.7-24.2	OB	25
MW-24B	756551.9	689362.1	76.14	76.14	75.83	24	52.1	33-43	BR	44
MW-25	756652.2	689387.5	79.21	79.21	78.81	14	65.2	8.7-18.2	OB/BR	19
MW-25B	756654.2	689380.3	79.30	79.30	79.10	17	62.3	26.8-36.8	BR	37
MW-26	756593.6	689701.0	95.98	95.98	95.61	15	81.0	5.3-10.3	OB	10.3
MW-26B	756593.6	689701.0	95.98	95.98	95.57	15	81.0	18-28	BR	30
MW-27B[1]	756634.2	689586.4	91.46	91.46	91.14	20	71.5	20-63	BR/OH	63
MW-27BA (1,2)	756634.2	689586.4	91.46	91.46	91.22	20	71.5	29.9-30.4	BR	63
MW-27BB (3,4)	756634.2	689586.4	91.46	91.46	91.22	20	71.5	39.5-40	BR	63
MW-27BC (5,6,7)	756634.2	689586.4	91.46	91.46	91.22	20	71.5	55-56	BR	63
MW-28B	755295.0	688427.7	39.32	39.32	39.04	16.0	23.3	22.4-27.4	BR	28.5
MW-29BA (1,2)	756648.0	689310.3	78.52	78.52	78.03	32.0	46.5	23.6-24.1	OB	75.0
MW-29BB (3,4)	756648.0	689310.3	78.52	78.52	78.03	32.0	46.5	44.3-44.8	BR	75.0
MW-29BC (5,6,7)	756648.0	689310.3	78.52	78.52	78.03	32.0	46.5	60.4-62.5	BR	75.0
MW-30BA (1,2)	756584.0	689330.8	75.24	75.24	74.66	24.0	51.2	16.2-16.7	OB	70.0
MW-30BB (3,4)	756584.0	689330.8	75.24	75.24	74.66	24.0	51.2	29.5-30.0	BR	70.0
MW-30BC (5,6,7)	756584.0	689330.8	75.24	75.24	74.66	24.0	51.2	56.6-58.3	BR	70.0
BR-101A (1,2)	756520.9	689349.5	75.29	75.29	75.03	22.0	53.3	39.8-40.2	BR	100.0
BR-101B (3,4)	756520.9	689349.5	75.29	75.29	75.03	22.0	53.3	54-54.4	BR	100.0
BR-101C (5,6)	756520.9	689349.5	75.29	75.29	75.03	22.0	53.3	67.7-68.1	BR	100.0
BR-101D (7)	756520.9	689349.5	75.29	75.29	75.03	22.0	53.3	80-80.2	BR	100.0
BR-102A (1,2)	756466.2	689344.0	74.03	74.03	73.84	22.0	52.0	35-35.5	BR	100.0
BR-102B (3,4)	756466.2	689344.0	74.03	74.03	73.84	22.0	52.0	60-60.5	BR	100.0
BR-102C (5,6,7)	756466.2	689344.0	74.03	74.03	73.84	22.0	52.0	88-89	BR	100.0
MW-26CLIFF	754815.2	688205.2	23.83	23.83	23.51	UNK	UNK	UNK	UNK	19.7
MW-COSTCO1	752366.3	687352.2	13.57	13.57	13.17	UNK	UNK	UNK	UNK	20.7

Table 2.2: Summary of Monitoring Well Construction and Elevation Data

Location ID	Northing	Easting	Ground Elevation (ft msl)	Casing Elevation (ft msl)	Riser Elevation (ft msl)	Depth to Bedrock (ft bgs)	Bedrock Surface Elevation (ft msl)	Screening Interval (ft bgs)	Well Type	Boring Depth (ft bgs)
MW-COSTCO2	752358.7	687346.5	13.52	13.52	13.28	UNK	UNK	UNK	UNK	23.0

Table 2.2: Summary of Monitoring Well Construction and Elevation Data

Location ID	Northing	Easting	Ground Elevation (ft msl)	Casing Elevation (ft msl)	Riser Elevation (ft msl)	Depth to Bedrock (ft bgs)	Bedrock Surface Elevation (ft msl)	Screening Interval (ft bgs)	Well Type	Boring Depth (ft bgs)
MW-501[2]	756616.8	689402.4	76.44	76.44	76.27	UNK	UNK	0-2.8	OB	2.8
MW-504[2]	756565.8	689465.1	76.49	76.49	76.30	14.8	61.7	4.5-14.5	OB	18.2
MW-505[2]	756556.9	689491.6	87.13	87.13	NM	15.5	71.6	21-26	BR	26.5
PZ-12	755659.9	688672.9	47.66	47.66	47.35	UNK	UNK	10.5-20.1	OB	20.5
PZ-14	755293.8	688419.9	39.69	39.69	39.35	>20	<19.7	10-19.6	OB	20.0
PZ-15	756643.1	689442.7	76.59	76.59	76.27	>4.5	<72.1	0.5-3.7	OB	4.5
PZ-19	756605.6	689352.7	76.74	76.74	76.52	>14.2	<62.5	3.7-13.7	OB	14.2
PZ-20	756585.4	689421.2	76.49	76.49	76.25	>10.0	<66.5	4.1-9.1	OB	10.0
PZ-21	756526.8	689369.6	76.41	76.41	75.97	23.5	52.9	12.8-22.8	OB	24
PZ-22	756584.7	689359.1	76.59	76.59	76.26	>21.5	<55.1	11.0-21.0	OB	21.5
PZ-23	756648.7	689427.4	76.57	76.57	76.31	2.6	74.0	7.6-12.6	OB/BR	13.5
PZ-24	754200.4	688043.8	22.43	22.43	22.06	22.0	0.4	10.1-21.1	OB	22.5
PZ-28	756597.1	689425.7	76.49	76.49	76.17	2.2	74.3	4.9-9.9	OB/BR	10.7
PZ-29	756687.2	689235.3	78.30	78.30	78.08	UNK	UNK	7-12	OB	12.0
PZ-33	756536.7	689440.2	76.71	76.71	76.35	12.0	64.7	13-18	BR	18.0
PZ-34	756526.1	689402.6	76.82	76.82	76.59	UNK	UNK	4.5-9.5	OB	10.0
PZ-35	756528.6	689395.4	76.86	76.86	76.62	18.0	58.9	27-32	BR	32.0
PZ-36	756541.0	689380.0	76.78	76.78	76.45	24.7	52.1	31-36	BR	31.7
PZ-38	756511.7	689398.1	78.76	78.76	78.51	24.3	54.5	26-31	BR	31.5
PZ-39	756511.6	689394.9	78.32	78.32	78.06	UNK	UNK	11.6-21.6	OB	21.8
Burling Brook	752327.4	687360.7	NA	NA	14.59	NA	NA	NA	NA	NA
SP-002	756580.3	689289.3	72.66	72.66	NA	UNK	UNK	NA	OB	5.9

Notes:
MW = monitoring well
PZ = one-inch microwell
ft bgs = feet below ground surface
msl = mean sea level
Wells installed in 2012 were surveyed by Lu Engineers
Wells installed in 2013-2014 were surveyed by Prudent Engineering
NM = not measured
NA = not applicable
OB = overburden well
BR = bedrock well
UNK = unknown
OH = open hole
Northing/Easting = North American Datum 83/96 - NYSPCS EAST (US survey ft); Elevations = North American Vertical Datum 88 (US survey ft)
Data presented on table reflects most recent survey of data point.

[1] MW-27B was converted into a multi-channel well in December, 2013

[2] One-inch microwell

Table 2.3: Summary of SRI Groundwater Elevation Data

Location ID	Casing Elevation (ft msl)	Riser Elevation (ft msl)	Bottom of Well (ft TOR)	Depth to GW October 2015 (ft TOR)	GW Elevation (October 2015) (ft msl)
MW-21	88.50	88.04	22.9	10.70	77.34
MW-22	83.64	83.46	23.3	10.99	72.47
MW-22B	84.02	83.54	39.9	9.82	73.72
MW-23	72.69	72.45	18.6	7.97	64.48
MW-24	76.25	76.12	24.5	8.71	67.41
MW-24B	76.14	75.83	42.9	7.62	68.21
MW-25	79.21	78.81	18.3	7.49	71.32
MW-25B	79.30	79.10	36.5	8.45	70.65
MW-26	95.98	95.61	10.3	6.57	89.04
MW-26B	95.98	95.57	27.7	13.84	81.73
MW-28B	39.32	39.04	27.5	NM	NM
BR-101A (1,2)	75.29	75.03	40.2	8.42	66.61
BR-101B (3,4)	75.29	75.03	54.4	8.40	66.63
BR-101C (5,6)	75.29	75.03	68.1	7.67	67.36
BR-101D (7)	75.29	75.03	80.2	8.49	66.54
BR-102A (1,2)	74.03	73.84	35.5	8.45	65.39
BR-102B (3,4)	74.03	73.84	60.5	8.37	65.47
BR-102C (5,6,7)	74.03	73.84	89.0	6.95	66.89
PZ-15	76.59	76.27	3.5	1.27	75.00
PZ-19	76.74	76.52	13.9	8.84	67.68
PZ-20	76.49	76.25	9.4	3.06	73.19
PZ-21	76.41	75.97	22.6	8.56	67.41
PZ-22	76.59	76.26	20.7	8.65	67.61
PZ-23	76.57	76.31	12.7	1.56	74.75
PZ-28	76.49	76.17	9.9	1.70	74.47
PZ-33	76.71	76.35	18.0	3.53	72.82
PZ-34	76.82	76.59	9.50	7.34	69.25
PZ-35	76.86	76.62	32.0	7.90	68.72
PZ-36	76.78	76.45	36.0	7.99	68.46
PZ-38	78.76	78.51	31.0	10.05	68.46

Created by: NWV 12/30/2015
Checked by: JMF 1/6/2016

Table 2.3: Summary of SRI Groundwater Elevation Data

Location ID	Casing Elevation (ft msl)	Riser Elevation (ft msl)	Bottom of Well (ft TOR)	Depth to GW October 2015 (ft TOR)	GW Elevation (October 2015) (ft msl)
PZ-39	78.32	78.06	21.6	9.78	68.28
MW-501[1]	76.44	76.27	2.3	1.54	74.73
MW-504[1]	76.49	76.30	14.1	1.35	74.95
MW-505[1]	87.13	NM	24.9	1.19	NA

Notes:
MW = monitoring well
GW = groundwater
PZ = one-inch microwell
ft TOR = feet below top of riser
ft msl = feet above mean sea level
NA = not applicable
NM = not measured
[1] Monitoring well installed as a one-inch microwell

Table 4.1: SRI Sample Results Tables Notes

General Notes:
ND- non detect
ft bgs - feet below ground surface
ft msl - feet above mean sea level
Bold result - analyte detected
FS - field sample
FD - field duplicate
mg/kg - milligram per kilogram (ppm)
ug/kg- micrograms per kilogram (ppb)
ug/l - micrograms per liter (ppb)
mg/l - milligrams per liter (ppm)
ug/m^3 - micrograms per cubic meter
NA - not applicable
NS - No Standard
MNR - Metro North Railroad
NYSDOH - New York State Department of Health
111-TCA - 1,1,1 Trichloroethane

Analytical Parameters
VOC - volatile organic compound
SVOC - semi-volatile organic compound
TPH - total petroleum hydrocarbons

Qualifiers:
U - Not detected greater than the Reporting Limit
J - estimated value
D - Result is reported from a dilution

Soil/Bedrock Notes:
SCO- NYSDEC Part 375 Remedial Program Soil Cleanup Objective
P of G -Protection of GW
RES- Residential SCO
COMM-Commercial SCO
IND- Industrial SCO
Grey highlighted cells indicate an exceedance of the Protection of Groundwater SCO
Yellow highlighted cells indicate an exceedance of the Residential SCO
Orange highlighted cells indicate an exceedance of the Commercial SCO
Red highlighted cells indicate an exceedance of the Industrial SCO

Groundwater Notes:
Class GA standards and guidance values from Technical Operational Guidance Series 1.1.1
Red highlighted cells indicate an exceedance of the Class GA standards

Air and Vapor Notes:
SA - Sewer Air Sample
SVG - Sewer Vapor Grab Sample

Table 4.2 Site Surface Soil VOC Results

					Area of Concern	*Site Building-Potential Former Dry-cleaning Machine Location*	*Site Building-111-TCA Plume*
					Location	GS-501	GS-504
					Sample Date	10/17/2015	10/18/2015
					Sample ID	360109-GS-501001	360109-GS-504001
					Soil/Bedrock Type	Sand	Sand
					Sample Depth (ft bgs)	1.5 - 1.5	1.2 - 1.5
					Approximate Groundwater Depth (ft bgs)	1.5	>18.2
					Qc Code	FS	FS
	SCO					
Parameter	**P of G**	**RES**	**COMM**	**IND**		
Site Related Contaminants of Concern						
1,1,1-Trichloroethane	0.68	100	500	1,000	0.048 U	**0.11**
Cis-1,2-Dichloroethene	0.25	59	500	1,000	0.048 U	0.032 U
Tetrachloroethene	1.3	5.5	150	300	3.3 J	**0.15**
Trichloroethene	0.47	10	200	400	0.048 U	2.8
Vinyl chloride	0.02	0.21	13	27	0.048 U	0.032 U
Other VOCs						
1,1-Dichloroethane	0.27	19	240	480	0.048 U	0.032 U
1,1-Dichloroethene	0.33	100	500	1,000	0.048 U	**0.077**
1,2-Dichlorobenzene	1.1	100	500	1,000	0.048 U	0.032 U
1,4-Dichlorobenzene	1.8	9.8	130	250	0.048 U	0.032 U
Acetic acid, methyl ester	NS	NS	NS	NS	0.048 U	0.032 U
Acetone	0.05	100	500	1,000	0.24 U	0.16 U
Benzene	0.06	2.9	44	89	0.048 U	0.032 U
Chloroform	0.37	10	350	700	0.048 U	0.032 U
Cyclohexane	NS	NS	NS	NS	0.048 U	0.032 U
Ethylbenzene	1	30	390	780	0.048 U	0.032 U
Isopropylbenzene	NS	NS	NS	NS	0.048 U	0.032 U
Methyl cyclohexane	NS	NS	NS	NS	0.048 U	0.032 U
Styrene	NS	NS	NS	NS	0.048 U	0.032 U
Toluene	0.7	100	500	1,000	0.048 U	0.032 U
trans-1,2-Dichloroethene	0.19	100	500	1,000	0.048 U	0.032 U
Xylenes, Total	1.6	100	500	1,000	0.097 U	0.063 U

Notes: See Table 4.1
Results are reported in milligrams per kilogram (mg/kg)

Table 4.3 Site Subsurface Soil VOC Results

Area of Concern					*Site Building - Potential Dry-cleaning Machine Location*						*Site Building - 111-TCA Plume*		*Background*		
Location					GS-500	GS-500	GS-500	GS-502	GS-503	GS-503	GS-504	GS-504	GS-505	GS-505	GS-505
Sample Date					10/17/2015	10/17/2015	10/17/2015	10/17/2015	10/26/2015	10/26/2015	10/18/2015	10/18/2015	10/18/2015	10/18/2015	10/18/2015
Sample ID					360109-GS-500003	360109-GS-500007	360109-GS-500008	360109-GS-502003	360109-GS-503003	360109-GS-503006	360109-GS-504005	360109-GS-504008	360109-GS-505003	360109-GS-505009	360109-GS-505012
Soil/Bedrock Type					Sand	Sand	Bedrock	Fill	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Sample Depth (ft bgs)					3 - 3.4	6.5 - 6.8	7.5 - 7.8	2.8 - 2.8	3.1 - 3.1	6.2 - 6.2	4.8 - 4.8	7.8 - 8	3.2 - 3.5	8.8 - 9	12 - 12.4
Approximate Groundwater Depth (ft bgs)					NM	NM	NM	>2.8	NM	NM	>18.2	>18.2	>26.5	>26.5	>26.5
Qc Code					FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS
	SCO														
Parameter	**P of G**	**RES**	**COMM**	**IND**											
Site Related Contaminants of Concern															
1,1,1-Trichloroethane	0.68	100	500	1,000	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	**0.11**	**0.19**	0.038 U	0.039 U	**0.074**
Cis-1,2-Dichloroethene	0.25	59	500	1,000	0.031 U	**0.013** J	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Tetrachloroethene	1.3	5.5	150	300	**0.028** J	0.03 U	0.036 U	**0.046** J	0.044 U	**0.029** J	**0.0046** J	**0.0053** J	0.038 U	0.039 U	0.039 U
Trichloroethene	0.47	10	200	400	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.97	1.2	0.038 U	0.039 U	**0.42**
Vinyl chloride	0.02	0.21	13	27	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Other VOCs															
1,1-Dichloroethane	0.27	19	240	480	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
1,1-Dichloroethene	0.33	100	500	1,000	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	**0.035**	**0.16**	0.038 U	0.039 U	**0.021** J
1,2-Dichlorobenzene	1.1	100	500	1,000	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
1,4-Dichlorobenzene	1.8	9.8	130	250	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Acetic acid, methyl ester	NS	NS	NS	NS	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Acetone	0.05	100	500	1,000	0.15 U	0.15 U	0.18 U	0.26 U	0.22 U	0.22 U	0.16 U	0.16 U	0.19 U	0.19 U	0.19 U
Benzene	0.06	2.9	44	89	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Chloroform	0.37	10	350	700	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Cyclohexane	NS	NS	NS	NS	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Ethylbenzene	1	30	390	780	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Isopropylbenzene	NS	NS	NS	NS	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Methyl cyclohexane	NS	NS	NS	NS	0.031 U	0.094	0.026 J	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Styrene	NS	NS	NS	NS	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Toluene	0.7	100	500	1,000	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
trans-1,2-Dichloroethene	0.19	100	500	1,000	0.031 U	0.03 U	0.036 U	0.051 U	0.044 U	0.044 U	0.031 U	0.031 U	0.038 U	0.039 U	0.039 U
Xylenes, Total	1.6	100	500	1,000	0.061 U	0.059 U	0.072 U	0.1 U	0.087 U	0.088 U	0.063 U	0.063 U	0.076 U	0.078 U	0.078 U

Notes: See Table 4.1
Results are reported in milligrams per kilogram (mg/kg)

Table 4.3 Site Subsurface Soil VOC Results

Area of Concern					*Sidewalk South of the Building - Vicinity of the Sanitary Sewer*								
Location					GS-506	GS-506	GS-506	GS-506	GS-507	GS-507	GS-507	GS-508
Sample Date					10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015
Sample ID					360109-GS-506003	360109-GS-506011D	360109-GS-506011	360109-GS-506016	360109-GS-507003	360109-GS-507009	360109-GS-507012	360109-GS-508013
Soil/Bedrock Type					Silty Sand	Sand	Sand	Sand	Silty Sand	Sand	Sand	Sand
Sample Depth (ft bgs)					2 - 3	10 - 11	10 - 11	15 - 16	2 - 3	8 - 9	11 - 12	12 - 13
Approximate Groundwater Depth (ft bgs)					11.5	11.5	11.5	11.5	9	9	9	11
Qc Code					FS	FD	FS	FS	FS	FS	FS	FS
	SCO											
Parameter	**P of G**	**RES**	**COMM**	**IND**								
Site Related Contaminants of Concern												
1,1,1-Trichloroethane	0.68	100	500	1,000	0.043 U	**0.032** J	**0.033** J	0.052 UJ	0.046 U	0.027 U	0.041 UJ	0.034 U
Cis-1,2-Dichloroethene	0.25	59	500	1,000	0.043 U	62	87	4.9 J	0.046 U	0.33	11	**0.014** J
Tetrachloroethene	1.3	5.5	150	300	0.043 U	330	250	390	**0.18**	**0.039**	0.041 UJ	0.034 U
Trichloroethene	0.47	10	200	400	0.043 U	250	300	47	**0.034** J	**0.015** J	0.041 UJ	0.034 U
Vinyl chloride	0.02	0.21	13	27	0.043 U	0.91 J	1.8 J	0.024 J	0.046 U	0.44	1.8 J	**0.015** J
Other VOCs												
1,1-Dichloroethane	0.27	19	240	480	0.043 U	**0.031** J	**0.032** J	0.052 UJ	0.046 U	0.027 U	**0.014** J	0.034 U
1,1-Dichloroethene	0.33	100	500	1,000	0.043 U	**0.13** J	**0.15** J	0.052 UJ	0.046 U	0.027 U	**0.08** J	0.034 U
1,2-Dichlorobenzene	1.1	100	500	1,000	0.043 U	**0.18** J	**0.24** J	**0.15** J	0.046 U	0.027 U	**0.26** J	0.034 U
1,4-Dichlorobenzene	1.8	9.8	130	250	0.043 U	**0.25** J	**0.32** J	**0.25** J	0.046 U	**0.034**	**0.24** J	0.034 U
Acetic acid, methyl ester	NS	NS	NS	NS	0.043 U	0.037 UJ	0.03 UJ	0.052 UJ	0.046 U	0.027 U	0.041 UJ	0.034 U
Acetone	0.05	100	500	1,000	0.22 U	0.19 UJ	0.15 UJ	0.26 UJ	0.23 U	0.14 U	0.2 UJ	0.17 U
Benzene	0.06	2.9	44	89	0.043 U	0.037 UJ	0.03 UJ	0.052 UJ	0.046 U	0.027 U	0.041 UJ	0.034 U
Chloroform	0.37	10	350	700	0.043 U	0.037 UJ	0.03 UJ	0.052 UJ	0.046 U	0.027 U	0.041 UJ	0.034 U
Cyclohexane	NS	NS	NS	NS	0.043 U	0.54 J	0.48 J	0.52 J	0.046 U	0.027 U	0.041 UJ	0.034 U
Ethylbenzene	1	30	390	780	0.043 U	8	8.7	3.8 J	0.046 U	**0.91**	6.6	0.034 U
Isopropylbenzene	NS	NS	NS	NS	0.043 U	0.83 J	1.1 J	0.79 J	0.046 U	0.077	0.79 J	0.034 U
Methyl cyclohexane	NS	NS	NS	NS	0.043 U	3.3 J	2.7 J	4.8 J	0.046 U	2.1	8.4	0.034 U
Styrene	NS	NS	NS	NS	0.043 U	0.037 UJ	0.03 UJ	0.052 UJ	0.046 U	0.027 U	0.041 UJ	0.034 U
Toluene	0.7	100	500	1,000	0.043 U	**0.18** J	**0.24** J	**0.27** J	0.046 U	**0.58**	2.2 J	0.034 U
trans-1,2-Dichloroethene	0.19	100	500	1,000	0.043 U	0.24 J	0.24 J	**0.063** J	0.046 U	**0.0093** J	**0.12** J	0.034 U
Xylenes, Total	1.6	100	500	1,000	0.086 U	**0.097** J	**0.27** J	**0.89** J	0.092 U	**0.88**	**1.4** J	0.068 U

Notes: See Table 4.1
Results are reported in milligrams per kilogram (mg/kg)

Table 4.4 Railroad Surface Soil VOC Results

				Location	SS-400	SS-401	SS-402	SS-403	SS-404	SS-405	SS-406	SS-407	SS-408
				Sample Date	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015
				Sample ID	360109-SS-400000	360109-SS-401000	360109-SS-402000	360109-SS-403000	360109-SS-404000	360109-SS-405000	360109-SS-406000	360109-SS-407000	360109-SS-408000
				Soil/Bedrock Type	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
				Sample Depth (ft bgs)	0 - 3	0 - 4	0 - 1	0 - 2	0 - 1	0 - 2	0 - 1	0 - 1	0 - 2
				Approximate Groundwater Depth (ft bgs)	10.3	>15	11.4	10.6	11.9	11.3	11.1	11.7	12.2
				Qc Code	FS	FS	FS	FS	FS	FS	FS	FS	FS
	SCO												
Parameter	**P of G**	**RES**	**COMM**	**IND**									
Site Related Contaminants of Concern													
1,1,1-Trichloroethane	0.68	100	500	1,000	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
Cis-1,2-Dichloroethene	0.25	59	500	1,000	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
Tetrachloroethene	1.3	5.5	150	300	4.3	4.4	14	**0.63**	6.3	5.6	**0.54**	**1.1**	**0.4**
Trichloroethene	0.47	10	200	400	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
Vinyl chloride	0.02	0.21	13	27	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
Other VOCs													
1,1-Dichloroethane	0.27	19	240	480	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
1,1-Dichloroethene	0.33	100	500	1,000	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
1,2-Dichlorobenzene	1.1	100	500	1,000	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
1,4-Dichlorobenzene	1.8	9.8	130	250	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
Acetic acid, methyl ester	NS	NS	NS	NS	0.2	0.15	0.073 U	0.043 U	0.28	0.08 U	0.061	0.089 U	0.051 U
Acetone	0.05	100	500	1,000	0.25 U	0.28 U	0.37 U	0.22 U	0.35 U	0.4 U	0.24 U	0.51	0.25 U
Benzene	0.06	2.9	44	89	0.051 U	0.056 U	0.073 U	0.043 U	**0.036** J	0.08 U	**0.011** J	0.34	0.051 U
Chloroform	0.37	10	350	700	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
Cyclohexane	NS	NS	NS	NS	0.033 J	0.056 U	0.081	0.043 U	0.17	0.08 U	0.048 U	1.2	0.051 U
Ethylbenzene	1	30	390	780	0.051 U	0.056 U	0.073 U	0.043 U	**0.043** J	0.08 U	0.048 U	**0.31**	0.051 U
Isopropylbenzene	NS	NS	NS	NS	0.051 U	0.056 U	0.073 U	0.043 U	0.033 J	0.08 U	0.048 U	0.16	0.051 U
Methyl cyclohexane	NS	NS	NS	NS	0.099	0.056 U	0.26	0.043 U	0.53	0.19	0.11	4.1	0.027 J
Styrene	NS	NS	NS	NS	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
Toluene	0.7	100	500	1,000	**0.038** J	0.056 U	**0.039** J	0.043 U	**0.16**	**0.023** J	**0.048**	1.4	0.051 U
trans-1,2-Dichloroethene	0.19	100	500	1,000	0.051 U	0.056 U	0.073 U	0.043 U	0.07 U	0.08 U	0.048 U	0.089 U	0.051 U
Xylenes, Total	1.6	100	500	1,000	**0.092** J	0.11 U	**0.079** J	0.087 U	**0.36**	0.16 U	**0.08** J	2.9	0.1 U

Notes: See Table 4.1
Results are reported in milligrams per kilogram (mg/kg)

Table 4.5 Railroad Subsurface Soil VOC Results

					Location	SS-301	SS-301	SS-301	SS-301	SS-400	SS-400	SS-401	SS-401	SS-402	SS-402	SS-403
					Sample Date	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015
					Sample ID	360109-SS-301006D	360109-SS-301006	360109-SS-301010	360109-SS-301012	360109-SS-400005	360109-SS-400012	360109-SS-401006	360109-SS-401011	360109-SS-402006	360109-SS-402011	360109-SS-403006
					Soil/Bedrock Type	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
					Sample Depth (ft bgs)	5 - 6	5 - 6	9 - 10	11 - 12	4 - 5	11 - 12	5 - 6	10 - 11	5 - 6	10 - 11	5 - 6
					Approximate Groundwater Depth (ft bgs)	10	10	10	10	10.3	10.3	>15	>15	11.4	11.4	10.6
					Qc Code	FD	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS
	SCO															
Parameter	**P of G**	**RES**	**COMM**	**IND**												
Site Related Contaminants of Concern																
1,1,1-Trichloroethane	0.68	100	500	1,000	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Cis-1,2-Dichloroethene	0.25	59	500	1,000	0.045 U	0.052 U	0.045 U	**0.06**	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Tetrachloroethene	1.3	5.5	150	300	2.6	3	**0.095**	**0.29**	**0.6**	**0.062**	1.9	0.008 U	**0.036** J	**0.061**	**0.3**
Trichloroethene	0.47	10	200	400	**0.047**	**0.055**	0.045 U	**0.02** J	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Vinyl chloride	0.02	0.21	13	27	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Other VOCs																
1,1-Dichloroethane	0.27	19	240	480	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
1,1-Dichloroethene	0.33	100	500	1,000	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
1,2-Dichlorobenzene	1.1	100	500	1,000	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
1,4-Dichlorobenzene	1.8	9.8	130	250	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Acetic acid, methyl ester	NS	NS	NS	NS	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Acetone	0.05	100	500	1,000	0.23 U	0.26 U	0.23 U	0.24 U	0.25 U	0.21 U	0.24 U	**0.007** J	0.23 U	**0.021**	0.22 U
Benzene	0.06	2.9	44	89	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Chloroform	0.37	10	350	700	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Cyclohexane	NS	NS	NS	NS	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Ethylbenzene	1	30	390	780	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Isopropylbenzene	NS	NS	NS	NS	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Methyl cyclohexane	NS	NS	NS	NS	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Styrene	NS	NS	NS	NS	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Toluene	0.7	100	500	1,000	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
trans-1,2-Dichloroethene	0.19	100	500	1,000	0.045 U	0.052 U	0.045 U	0.047 U	0.049 U	0.042 U	0.047 U	0.0044 U	0.045 U	0.004 U	0.044 U
Xylenes, Total	1.6	100	500	1,000	0.091 U	0.1 U	0.09 U	0.095 U	0.099 U	0.084 U	0.095 U	0.0089 U	0.091 U	0.0081 U	0.088 U

Notes: See Table 4.1
Results are reported in milligrams per kilogram (mg/kg)

Table 4.5 Railroad Subsurface Soil VOC Results

Location					SS-403	SS-404	SS-404	SS-405	SS-405	SS-406	SS-406	SS-407	SS-407	SS-407	SS-408	SS-408
Sample Date					10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015	10/22/2015
Sample ID					360109-SS-403012	360109-SS-404006	360109-SS-404011	360109-SS-405008	360109-SS-405012	360109-SS-406006	360109-SS-406011	360109-SS-407006	360109-SS-407006D	360109-SS-407012	360109-SS-408007	360109-SS-408011
Soil/Bedrock Type					Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Sample Depth (ft bgs)					11 - 12	5 - 6	10 - 11	7 - 8	11 - 12	5 - 6	10 - 11	5 - 6	5 - 6	11 - 12	6 - 7	10 - 11
Approximate Groundwater Depth (ft bgs)					10.6	11.9	11.9	11.3	11.3	11.1	11.1	11.7	11.7	11.7	12.2	12.2
Qc Code					FS	FS	FS	FS	FS	FS	FS	FD	FS	FS	FS	FS
	SCO															
Parameter	**P of G**	**RES**	**COMM**	**IND**												
Site Related Contaminants of Concern																
1,1,1-Trichloroethane	0.68	100	500	1,000	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Cis-1,2-Dichloroethene	0.25	59	500	1,000	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	**0.065** J	0.045 U	0.046 U
Tetrachloroethene	1.3	5.5	150	300	**0.015** J	**0.16**	**0.88**	**0.22**	**0.27**	**0.38**	**0.75**	0.048 U	0.052 U	**0.035** J	**0.27**	**0.49**
Trichloroethene	0.47	10	200	400	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	**0.033** J	0.045 U	0.046 U
Vinyl chloride	0.02	0.21	13	27	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Other VOCs																
1,1-Dichloroethane	0.27	19	240	480	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
1,1-Dichloroethene	0.33	100	500	1,000	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
1,2-Dichlorobenzene	1.1	100	500	1,000	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
1,4-Dichlorobenzene	1.8	9.8	130	250	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Acetic acid, methyl ester	NS	NS	NS	NS	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.2	0.045 U	0.046 U
Acetone	0.05	100	500	1,000	0.25 U	0.25 U	0.23 U	0.25 U	0.22 U	0.27 U	0.29 U	0.24 U	0.26 U	0.33 U	0.23 U	0.23 U
Benzene	0.06	2.9	44	89	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Chloroform	0.37	10	350	700	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Cyclohexane	NS	NS	NS	NS	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Ethylbenzene	1	30	390	780	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Isopropylbenzene	NS	NS	NS	NS	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Methyl cyclohexane	NS	NS	NS	NS	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Styrene	NS	NS	NS	NS	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Toluene	0.7	100	500	1,000	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
trans-1,2-Dichloroethene	0.19	100	500	1,000	0.05 U	0.049 U	0.046 U	0.05 U	0.044 U	0.054 U	0.057 U	0.048 U	0.052 U	0.066 U	0.045 U	0.046 U
Xylenes, Total	1.6	100	500	1,000	0.1 U	0.099 U	0.093 U	0.1 U	0.089 U	0.11 U	0.11 U	0.096 U	0.1 U	0.13 U	0.091 U	0.092 U

Notes: See Table 4.1
Results are reported in milligrams per kilogram (mg/kg)

Table 4.6 Sludge VOC Results

Area of Concern					*Site Building*				*Off-Site*
Location					DC-1	DC-2	DC-3	DC-4	MH-001
Sample Date					10/18/2015	10/18/2015	10/18/2015	10/18/2015	10/20/2015
Sample ID					360109-DC001	360109-DC002	360109-DC003	360109-DC004	360109-MH001010
Sample Depth (ft bgs)					0.4 - 0.5	0.5 - 0.6	0.5 - 0.6	0.6 - 0.7	9 - 10
Qc Code					FS	FS	FS	FS	FS
	SCO								
Parameter	**P of G**	**RES**	**COMM**	**IND**					
Site Related Contaminants of Concern									
1,1,1-Trichloroethane	0.68	100	500	1,000	0.055 U	0.12 U	0.13 U	0.12 U	**0.092** J
Cis-1,2-Dichloroethene	0.25	59	500	1,000	0.055 U	0.12 U	0.13 U	0.12 U	**0.1** J
Tetrachloroethene	1.3	5.5	150	300	**1.2**	**0.27**	**0.38**	0.12 U	0.15 U
Trichloroethene	0.47	10	200	400	0.055 U	0.12 U	0.13 U	0.12 U	0.15 U
Vinyl chloride	0.02	0.21	13	27	0.055 U	0.12 U	0.13 U	0.12 U	0.14 J
Other VOCs									
1,1-Dichloroethane	0.27	19	240	480	0.055 U	0.12 U	0.13 U	0.12 U	**0.18**
1,1-Dichloroethene	0.33	100	500	1,000	0.055 U	0.12 U	0.13 U	0.12 U	0.15 U
1,2-Dichlorobenzene	1.1	100	500	1,000	0.055 U	0.12 U	0.13 U	0.12 U	0.15 U
1,4-Dichlorobenzene	1.8	9.8	130	250	0.055 U	0.12 U	0.13 U	0.12 U	0.15 U
Acetic acid, methyl ester	NS	NS	NS	NS	0.064	0.12 U	1.3	0.14	0.7
Acetone	0.05	100	500	1,000	0.27 U	0.6 U	0.65 U	0.61 U	0.81
Benzene	0.06	2.9	44	89	0.055 U	0.12 U	0.13 U	0.12 U	0.15 U
Chloroform	0.37	10	350	700	0.055 U	0.12 U	0.13 U	0.12 U	0.15 U
Cyclohexane	NS	NS	NS	NS	0.055 U	0.12 U	0.13 U	0.12 U	0.15 U
Ethylbenzene	1	30	390	780	0.055 U	**0.051** J	0.13 U	0.12 U	0.15 U
Isopropylbenzene	NS	NS	NS	NS	0.055 U	0.12 U	0.13 U	0.12 U	0.15 U
Methyl cyclohexane	NS	NS	NS	NS	0.055 U	0.12 U	0.13 U	0.12 U	0.098 J
Styrene	NS	NS	NS	NS	0.055 U	0.16	0.13 U	0.12 U	0.15 U
Toluene	0.7	100	500	1,000	0.055 U	0.12 U	0.13 U	0.12 U	0.15 U
trans-1,2-Dichloroethene	0.19	100	500	1,000	0.055 U	0.12 U	0.13 U	0.12 U	**0.038** J
Xylenes, Total	1.6	100	500	1,000	0.11 U	**0.18** J	0.26 U	0.24 U	0.29 U

Notes: See Table 4.1
Results are reported in milligrams per kilogram (mg/kg)

Table 4.7 Site and Railroad Property Groundwater VOC Results

Area of Concern		*Site Building*						*Background*	*Parking lot - Site*	*Railroad*	
Location		MW-501	MW-504	PZ-33	PZ-34	PZ-34	PZ-35	MW-505	PZ-22	GW-301	GW-408
Sample Date		10/27/2015	10/27/2015	10/18/2015	10/17/2015	10/17/2015	10/17/2015	10/27/2015	10/18/2015	10/22/2015	10/22/2015
Sample ID		360109-MW-50102	360109-MW-50410	360109-PZ-3315	360109-PZ-3409	360109-PZ-3409D	360109-PZ-3527	360109-MW-50522	360109-PZ-2216	360109-GW-30114	360109-GW-40815
Screen Interval (ft bgs)		0 - 2	4 - 14	14 - 15	8 - 9	8 - 9	26 - 27	15 - 25	15 - 16	13 - 14	14 - 15
Aquifer		Overburden	Overburden	Highly Weathered BR	Overburden/Highly Weathered BR	Overburden/Highly Weathered BR	Weathered BR	Overburden/Highly Weathered BR	Overburden	Overburden	Overburden
Sample method		Low flow	Low flow	Low flow	Low flow	Low flow	Low flow	Low flow	Low flow	Grab	Grab
Qc Code		FS	FS	FS	FS	FD	FS	FS	FS	FS	FS
Paramter	**GA GW**										
Site Related Contaminants of Concern											
1,1,1-Trichloroethane	5	1 U	**160**	**570**	200 U	200 U	**17**	**910**	50 U	1 U	1 U
Cis-1,2-Dichloroethene	5	1 U	100 U	1 U	**27000**	**25000**	**29**	100 U	50 U	**110**	1 U
Tetrachloroethene	5	**11**	100 U	**130**	**17000**	**16000**	**2900**	100 U	**5700** J	**500**	**5.6**
Trichloroethene	5	1 U	**2400**	**2000**	**13000**	**12000**	**28**	**5700**	50 U	**33**	**0.5** J
Vinyl chloride	2	1 U	100 U	1 U	**1600**	**1500**	1 U	100 U	50 U	1 U	1 U
Other VOCs											
1,1,2-Trichloro-1,2,2-Trifluoroetha	5	1 U	100 U	**2.2**	200 U	200 U	1 U	100 U	50 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	100 U	1 U	200 UJ	**320** J	**36**	100 U	50 U	1 U	1 U
1,1-Dichloroethane	5	1 U	**56** J	**29**	200 U	200 U	**3.5**	100 U	50 U	1 U	1 U
1,1-Dichloroethene	5	1 U	**180**	**890**	200 U	200 U	**32**	**460**	50 U	1 U	1 U
1,2-Dichloroethane	0.6	1 U	100 U	**2**	200 U	200 U	**0.25** J	100 U	50 U	1 U	1 U
Acetone	50	10 U	1000 U	10 U	2000 U	2000 U	10 U	1000 U	500 U	10 U	**11** J
Chloroform	7	1 U	100 U	**2.8**	200 U	200 U	1 U	100 U	50 U	**1**	1 U
Methyl cyclohexane	NS	1 U	100 U	**0.21** J	200 U	200 U	**0.21** J	100 U	50 U	1 U	1 U
Methyl Tertbutyl Ether	NS	1 U	100 U	1 U	200 U	200 U	**0.21** J	100 U	50 U	1 U	1 U
trans-1,2-Dichloroethene	5	1 U	100 U	1 U	200 U	200 U	1 U	100 U	50 U	**3.6**	1 U

Notes: See Table 4A
Results reported in micrograms per liter (ug/L)

Prepared by: KMS 12/22/15
Checked by: NWV 12/29/15

Table 4.8: Hapsite Air and Vapor VOC Results

Area	Location ID	Matrix	Date Sampled	Time Sampled	Date Analyzed	Time Analyzed	Analyte	Result	DF	Comments
Structures 1 and 10 Indoor Air Sampling										
Structure 1	IAS-ST1-01	IA	10/27/2015	9:24	10/27/2015	9:24	Vinyl Chloride	2.6 U	1	Sewer cleanout area
							Trichloroethene	5.4 U	1	
							Tetrachloroethene	6.8 U	1	
	IAS-ST1-02	IA	10/27/2015	9:33	10/27/2015	9:33	Vinyl Chloride	2.6 U	1	East corner
							Trichloroethene	5.4 U	1	
							Tetrachloroethene	6.8 U	1	
	IAS-ST1-03	IA	10/27/2015	9:42	10/27/2015	9:42	Vinyl Chloride	2.6 U	1	East corner at washing machine drain into sewer
							Trichloroethene	**5** U	1	
							Tetrachloroethene	**7** U	1	
	IAS-ST1-04	IA	10/27/2015	9:51	10/27/2015	9:51	Vinyl Chloride	2.6 U	1	South side under staircase, paint storage closet
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
	IAS-ST1-05	IA	10/27/2015	10:00	10/27/2015	10:00	Vinyl Chloride	2.6 U	1	East end, tool storage cabinet
							Trichloroethene	5 U	1	
							Tetrachloroethene	**9**	1	
	IAS-ST1-06	IA	10/27/2015	10:13	10/27/2015	10:13	Vinyl Chloride	2.6 U	1	Hallway, First floor by door
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
Structure10	IAS-ST10-01	IA	10/27/2015	10:20	10/27/2015	10:20	Vinyl Chloride	**9.2**	1	West end basement indoor air (breathing zone)
							Trichloroethene	**28**	1	
							Tetrachloroethene	**59**	1	
	IAS-ST10-02	IA	10/27/2015	10:35	10/27/2015	10:35	Vinyl Chloride	**130.6**	1	West end basement, 6 inches above Dranjer
							Trichloroethene	**419**	1	
							Tetrachloroethene	**705**	1	
	IAS-ST10-03	IA	10/27/2015	10:45	10/27/2015	10:45	Vinyl Chloride	**4.4**	1	Floor by sewer lines junction, bottom of stairs west end
							Trichloroethene	**16**	1	
							Tetrachloroethene	**33**	1	
	IAS-ST10-04	IA	10/27/2015	10:58	10/27/2015	10:58	Vinyl Chloride	**13.1**	1	Floor at sewer pipe next to chimney, center of buiding, next to water heater
							Trichloroethene	**54**	1	
							Tetrachloroethene	**102**	1	
	IAS-ST10-05	IA	10/27/2015	11:15	10/27/2015	11:15	Vinyl Chloride	**6.9**	1	Furnace room
							Trichloroethene	**21**	1	
							Tetrachloroethene	**44**	1	
	IAS-ST10-06	IA	10/27/2015	11:32	10/27/2015	11:32	Vinyl Chloride	**25.1**	1	Storage space under staircase
							Trichloroethene	**124**	1	
							Tetrachloroethene	**217**	1	
	IAS-ST10-07	IA	10/27/2015	11:47	10/27/2015	11:47	Vinyl Chloride	**3.3**	1	West wall approx 1.25 feet up from floor, southern third of length
							Trichloroethene	**15**	1	
							Tetrachloroethene	**28**	1	
	IAS-ST10-08	IA	10/27/2015	11:55	10/27/2015	11:58	Vinyl Chloride	**3.8**	1	West wall, mid-length, behind dry wall
							Trichloroethene	**16**	1	
							Tetrachloroethene	**30**	1	
	IAS-ST10-09	IA	10/27/2015	11:25	10/27/2015	12:45	Vinyl Chloride	2.6 U	1	Sewer pipe penetration, southwest corner
							Trichloroethene	5 U	1	
							Tetrachloroethene	**10**	1	

Table 4.8: Hapsite Air and Vapor VOC Results

Area	Location ID	Matrix	Date Sampled	Time Sampled	Date Analyzed	Time Analyzed	Analyte	Result	DF	Comments
Structures 1 and 10 Indoor Air Sampling										
Structure10	IAS-ST10-01	IA	10/27/2015	15:04	10/27/2015	16:40	Vinyl Chloride	**23.6**	1	Resample -west end basement indoor air (breathing zone)
							Trichloroethene	**53**	1	
							Tetrachloroethene	**72**	1	
	IAS-ST10-02	IA	10/27/2015	15:05	10/27/2015	16:48	Vinyl Chloride	16.4	1	West end basement, 6 inches above Dranjer sealed with poly sheeting
							Trichloroethene	**84**	1	
							Tetrachloroethene	**123**	1	
Sewer Air and Vapor Sampling										
Industrial Overall	SVG-BP02-03	SVG	10/26/2015	15:37	10/26/2015	17:17	Vinyl Chloride	2.6 U	1	Industrial Overall Soil Vapor point in sidewalk
							Trichloroethene	**28**	1	
							Tetrachloroethene	**33**	1	
	SVG-BP03-03	SVG	10/26/2015	16:00	10/26/2015	16:58	Vinyl Chloride	**54**	1	Industrial Overall Soil Vapor point in sidewalk
							Trichloroethene	**70**	1	
							Tetrachloroethene	**181**	1	
	SVG-BP04-03	SVG	10/26/2015	16:10	10/26/2015	18:23	Vinyl Chloride	1280 U	500	Industrial Overall Soil Vapor point in sidewalk
							Trichloroethene	**18,774**	500	
							Tetrachloroethene	**173,771**	500	
Realyea Place	RP-01	SA	10/26/2015	14:00	10/26/2015	15:06	Vinyl Chloride	2.6 U	1	Upgradient sample from manhole at intersection of Relyea and Bartels Place
							Trichloroethene	**250**	1	
							Tetrachloroethene	**22**	1	
Bartels Place	BP-01	SA	10/26/2015	14:17	10/26/2015	15:29	Vinyl Chloride	**16**	1	Bartels Place manhole (MH-01) in front of Bulfamante
							Trichloroethene	**66**	1	
							Tetrachloroethene	**35**	1	
	SVG-BP05-03	SVG	10/27/2015	10:18	10/27/2015	13:24	Vinyl Chloride	2.6 U	1	Eastern most point on sewer line (8.8 ft west of connection to main line)
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
	SVG-BP06-03	SVG	10/27/2015	10:48	10/27/2015	13:33	Vinyl Chloride	2.6 U	1	42.4 ft west of building tie in, associated with potential lateral (PL-02)
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
	SVG-BP07-03	SVG	10/27/2015	11:05	10/27/2015	14:21	Vinyl Chloride	**1043.6**	50	60.9 ft west of building tie in, associated with potential lateral (PL-03)
						13:41	Trichloroethene	**161**	1	
							Tetrachloroethene	**109**	1	
	SVG-BP08-03	SVG	10/27/2015	11:17	10/27/2015	14:37	Vinyl Chloride	**102.1**	1	108.1 ft west of building tie in, potential lateral (PL-05) to 25 Bartels Place
							Trichloroethene	**8**	1	
							Tetrachloroethene	**17**	1	
	SVG-BP09-03	SVG	10/27/2015	11:27	10/27/2015	14:48	Vinyl Chloride	**5.7**	1	111.2 ft west of building tie in, potential lateral (PL-05) to 16 Bartels Place
							Trichloroethene	**10**	1	
							Tetrachloroethene	**19**	1	
	SVG-BP10-03	SVG	10/27/2015	11:45	10/27/2015	14:58	Vinyl Chloride	2.6 U	1	155.7 ft west of building tie in, NE side of MH-01
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
	SVG-BP11-03	SVG	10/27/2015	11:57	10/27/2015	15:10	Vinyl Chloride	2.6 U	1	155.7 ft west of building tie in, NW side of MH-01
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
	SVG-BP12-03	SVG	10/27/2015	12:10	10/27/2015	15:50	Vinyl Chloride	2.6 U	1	155.7 ft west of building tie in, SW side of MH-01
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
	SVG-BP13-03	SVG	10/27/2015	12:28	10/27/2015	15:58	Vinyl Chloride	2.6 U	1	188.7 ft west of building tie in, in front of 29 Bartels Place
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
	SVG-BP14-03	SVG	10/27/2015	14:04	10/27/2015	16:08	Vinyl Chloride	**7.5**	1	218.7 ft west of building tie in, in front of 31 Bartels place
							Trichloroethene	**18**	1	
							Tetrachloroethene	**33**	1	

Table 4.8: Hapsite Air and Vapor VOC Results

Area	Location ID	Matrix	Date Sampled	Time Sampled	Date Analyzed	Time Analyzed	Analyte	Result	DF	Comments
Sewer Air and Vapor Sampling										
Bartels Place	SVG-BP15-03	SVG	10/27/2015	14:23	10/27/2015	16:15	Vinyl Chloride	2.6 U	1	Storm sewer at end of Bartels Place adjacent to MNR Property
							Trichloroethene	5 U	1	
							Tetrachloroethene	**80**	1	
	SVG-BP16-03	SVG	10/27/2015	15:33	10/27/2015	16:23	Vinyl Chloride	2.6 U	1	Sample 7 ft east of BP-07, Industrial overall side of sewer line
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
	SVG-BP17-03	SVG	10/27/2015	15:48	10/27/2015	16:31	Vinyl Chloride	2.6 U	1	16 ft west of BP-07 between 21 and 23 Bartles Place
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
Pine Street	SA-PS01-10	SA	10/26/2015	14:35	10/26/2015	15:40	Vinyl Chloride	**3.2**	1	Pine Street manhole (MH-03) immediately adjacent to Pearlgreen Parking lot
							Trichloroethene	**11**	1	
							Tetrachloroethene	**35**	1	
	SA-PS02-11	SA	10/26/2015	14:45	10/26/2015	15:51	Vinyl Chloride	2.6 U	1	Pine Street manhole (MH-04) at turn of the sewer line
							Trichloroethene	**12**	1	
							Tetrachloroethene	**39**	1	
	SA-PS03-08	SA	10/26/2015	15:00	10/26/2015	15:59	Vinyl Chloride	2.6 U	1	Upgradient background sample at manhole outside 35 Pine Street
							Trichloroethene	5.4 U	1	
							Tetrachloroethene	**17**	1	
	SA-PS04-10	SA	10/26/2015	15:07	10/26/2015	16:08	Vinyl Chloride	2.6 U	1	Pine Street manhole (MH-05) in front of 21 Pine St
							Trichloroethene	5.4 U	1	
							Tetrachloroethene	**22**	1	
	SA-PS05-12	SA	10/26/2015	15:15	10/26/2015	16:40	Vinyl Chloride	**3.5**	1	Pine Street manhole (MH-06) in front of 12 Pine St
							Trichloroethene	**15**	1	
						16:40	Tetrachloroethene	**47**	1	
	SVG-PS06-06	SVG	10/28/2015	11:30	10/28/2015	13:15	Vinyl Chloride	2.6 U	1	Adjacent to brick wall for Pearlgreen Property
							Trichloroethene	**86**	1	
							Tetrachloroethene	**67**	1	
	SVG-PS07-03	SVG	10/28/2015	11:53	10/28/2015	13:23	Vinyl Chloride	2.6 U	1	4 ft south of manhole MH-04
							Trichloroethene	**16**	1	
							Tetrachloroethene	**26**	1	
	SA-PS08-06	SA	10/28/2015	12:20	10/28/2015	13:36	Vinyl Chloride	**27.9**	1	Stormwater Catch Basin on Pine Street
							Trichloroethene	**39**	1	
							Tetrachloroethene	**187**	1	
	SVG-PS09-03	SVG	10/28/2015	12:29	10/28/2015	13:44	Vinyl Chloride	2.6 U	1	53.4 ft south of MH-04; associated with potential lateral PL-01
							Trichloroethene	**23**	1	
							Tetrachloroethene	**24**	1	
	SVG-PS10-03	SVG	10/28/2015	12:50	10/28/2015	13:53	Vinyl Chloride	2.6 U	1	129.4 ft south of MH-04, associated with potential pipe break (PB-02)
							Trichloroethene	5 U	1	
							Tetrachloroethene	**8**	1	
	SVG-PS11-02	SVG	10/28/2015	13:05	10/28/2015	14:01	Vinyl Chloride	2.6 U	1	172.1 ft south of MH-04, located just north of manhole MH-05
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
	SVG-PS12-01	SVG	10/28/2015	13:40	10/28/2015	14:35	Vinyl Chloride	2.6 U	1	209.2 ft south of MH-04
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	
	SVG-PS13-01	SVG	10/28/2015	14:05	10/28/2015	14:44	Vinyl Chloride	2.6 U	1	264.7 ft south of MH-04; adjacent to MH-06
							Trichloroethene	**64**	1	
							Tetrachloroethene	**48**	1	
	SVG-PS14-01	SVG	10/28/2015	14:15	10/28/2015	14:52	Vinyl Chloride	2.6 U	1	313.5 ft south of MH-04
							Trichloroethene	5 U	1	
							Tetrachloroethene	7 U	1	

Notes: See Table 4.1

Table 5.1: RI & SRI Site Surficial Soil Summary of Statistics

Contaminants of Concern	Frequency of Detection	Range of Detected Concentrations	Protection of Groundwater	Frequency of Exceeding Protection of Groundwater	Residential SCG (1)	Frequency of Exceeding Residential SCG	Commercial SCG (1)	Frequency of Exceeding Commercial SCG	Industrial SCG (1)	Frequency of Exceeding Industrial SCG
Volatile Organics (mg/kg)										
1,1,1-Trichloroethane	5 / 43	0.00095 - 0.11	0.68	0 / 5	100	0 / 5	500	0 / 5	1000	0 / 5
Cis-1,2-Dichloroethene	9 / 43	0.00079 - 0.62	0.25	1 / 9	59	0 / 9	500	0 / 9	1000	0 / 9
Tetrachloroethene	37 / 43	0.019 - 83	1.3	23 / 37	5.5	12 / 37	150	0 / 37	300	0 / 37
Trichloroethene	25 / 43	0.0015 - 2.8	0.47	6 / 25	10	0 / 25	200	0 / 25	400	0 / 25
1,1-Dichloroethene	1 / 43	0.077 - 0.077	0.33	0 / 1	100	0 / 1	500	0 / 1	1000	0 / 1
Acetic acid, methyl ester	6 / 43	0.046 - 0.11	0	0 / 6	0	0 / 6	0	0 / 6	0	0 / 6
Acetone	1 / 32	0.0038 - 0.0038	0.05	0 / 1	100	0 / 1	500	0 / 1	1000	0 / 1
Chloroform	1 / 43	0.035 - 0.035	0.37	0 / 1	10	0 / 1	350	0 / 1	700	0 / 1
Cyclohexane	1 / 43	0.64 - 0.64	0	0 / 1	0	0 / 1	0	0 / 1	0	0 / 1
Ethyl benzene	1 / 43	0.048 - 0.048	1	0 / 1	30	0 / 1	390	0 / 1	780	0 / 1
Isopropylbenzene	3 / 43	0.017 - 0.28	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Methyl cyclohexane	3 / 43	0.022 - 5	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Methylene chloride	5 / 43	0.036 - 0.13	0.05	3 / 5	51	0 / 5	500	0 / 5	1000	0 / 5
Toluene	2 / 43	0.03 - 0.037	0.7	0 / 2	100	0 / 2	500	0 / 2	1000	0 / 2
trans-1,2-Dichloroethene	1 / 43	0.018 - 0.018	0.19	0 / 1	100	0 / 1	500	0 / 1	1000	0 / 1
Xylene, o	2 / 39	0.031 - 0.84	0.26	1 / 2	100	0 / 2	500	0 / 2	1000	0 / 2
Xylenes (m&p)	2 / 39	0.099 - 0.19	0.26	0 / 2	100	0 / 2	500	0 / 2	1000	0 / 2
Xylenes, Total	2 / 43	0.13 - 1	0.26	1 / 2	100	0 / 2	500	0 / 2	1000	0 / 2
Total Metals (mg/kg)										
Aluminum	3 / 3	4300 - 9960	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Arsenic	3 / 3	0.81 - 6.4	13	0 / 3	16	0 / 3	16	0 / 3	16	0 / 3
Barium	3 / 3	52.2 - 71.7	350	0 / 3	350	0 / 3	400	0 / 3	10000	0 / 3
Beryllium	1 / 3	0.011 - 0.011	7.2	0 / 1	14	0 / 1	590	0 / 1	2700	0 / 1
Cadmium	3 / 3	0.057 - 0.064	2.5	0 / 3	2.5	0 / 3	9.3	0 / 3	60	0 / 3
Calcium	3 / 3	394 - 8240	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Chromium	3 / 3	8.2 - 17	1	3 / 3	22	0 / 3	400	0 / 3	800	0 / 3
Cobalt	3 / 3	5.3 - 33.2	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Copper	3 / 3	16.6 - 20.3	50	0 / 3	270	0 / 3	270	0 / 3	10000	0 / 3
Iron	3 / 3	10300 - 12400	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Lead	3 / 3	2.8 - 45.8	63	0 / 3	400	0 / 3	1000	0 / 3	3900	0 / 3
Magnesium	3 / 3	1730 - 2790	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Manganese	3 / 3	112 - 505	1600	0 / 3	2000	0 / 3	10000	0 / 3	10000	0 / 3
Mercury	2 / 3	0.017 - 0.068	0.18	0 / 2	0.81	0 / 2	2.8	0 / 2	5.7	0 / 2
Nickel	3 / 3	10.8 - 17.5	30	0 / 3	140	0 / 3	310	0 / 3	10000	0 / 3
Potassium	3 / 3	1110 - 2350	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Selenium	1 / 3	1.2 - 1.2	3.9	0 / 1	36	0 / 1	1500	0 / 1	6800	0 / 1
Sodium	3 / 3	117 - 195	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Thallium	3 / 3	0.28 - 0.54	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Vanadium	3 / 3	12.4 - 17.5	0	0 / 3	0	0 / 3	0	0 / 3	0	0 / 3
Zinc	3 / 3	18.1 - 25.4	109	0 / 3	2200	0 / 3	10000	0 / 3	10000	0 / 3

1 - SCG = standards, criteria and guidance values; 6 NYCRR Part 375
Surface soils represent samples collected from 0.2 - 2 feet bgs

Table 5.2: RI & SRI Railroad Surficial Soil Summary of Statistics

Contaminants	Frequency of Detection	Range of Detected Concentrations	Protection of Groundwater	Frequency of Exceeding Protection of Groundwater	Residential SCG (1)	Frequency of Exceeding Residential SCG	Commercial SCG (1)	Frequency of Exceeding Commercial SCG	Industrial SCG (1)	Frequency of Exceeding Industrial SCG
Volatile Organics (mg/kg)										
1,1,1-Trichloroethane	3 / 89	0.061 - 0.061	0.68	0 / 3	100	0 / 3	500	0 / 3	1000	0 / 3
Cis-1,2-Dichloroethene	14 / 89	1 - 1	0.25	6 / 14	59	0 / 14	500	0 / 14	1000	0 / 14
Tetrachloroethene	83 / 89	190 - 190	1.3	44 / 83	5.5	34 / 83	150	2 / 83	300	0 / 83
Trichloroethene	26 / 89	3 - 3	0.47	14 / 26	10	0 / 26	200	0 / 26	400	0 / 26
1,2,3-Trichlorobenzene	1 / 65	0.048 - 0.048	--	0 / 1	--	0 / 1	--	0 / 1	--	0 / 1
1,2,4-Trichlorobenzene	1 / 89	0.039 - 0.039	--	0 / 1	--	0 / 1	--	0 / 1	--	0 / 1
1,4-Dichlorobenzene	1 / 89	0.043 - 0.043	1.8	0 / 1	9.8	0 / 1	130	0 / 1	250	0 / 1
Acetic acid, methyl ester	27 / 89	2.3 - 2.3	--	0 / 27	--	0 / 27	--	0 / 27	--	0 / 27
Acetone	2 / 87	0.51 - 0.51	0.05	2 / 2	100	0 / 2	500	0 / 2	1000	0 / 2
Benzene	5 / 89	0.34 - 0.34	0.06	2 / 5	2.9	0 / 5	44	0 / 5	89	0 / 5
Bromoform	5 / 89	0.026 - 0.026	--	0 / 5	--	0 / 5	--	0 / 5	--	0 / 5
Chloroform	3 / 89	2.2 - 2.2	0.37	1 / 3	10	0 / 3	350	0 / 3	700	0 / 3
Cyclohexane	5 / 89	1.2 - 1.2	--	0 / 5	--	0 / 5	--	0 / 5	--	0 / 5
Ethyl benzene	5 / 89	0.31 - 0.31	1	0 / 5	30	0 / 5	390	0 / 5	780	0 / 5
Isopropylbenzene	4 / 89	0.16 - 0.16	--	0 / 4	--	0 / 4	--	0 / 4	--	0 / 4
Methyl cyclohexane	10 / 89	4.1 - 4.1	--	0 / 10	--	0 / 10	--	0 / 10	--	0 / 10
Methylene chloride	11 / 89	0.17 - 0.17	0.05	6 / 11	51	0 / 11	500	0 / 11	1000	0 / 11
Toluene	16 / 89	1.6 - 1.6	0.7	2 / 16	100	0 / 16	500	0 / 16	1000	0 / 16
Trichlorofluoromethane	1 / 89	0.065 - 0.065	--	0 / 1	--	0 / 1	--	0 / 1	--	0 / 1
Xylene, o	5 / 65	0.15 - 0.15	1.6	0 / 5	100	0 / 5	500	0 / 5	1000	0 / 5
Xylenes (m&p)	6 / 65	0.44 - 0.44	1.6	0 / 6	100	0 / 6	500	0 / 6	1000	0 / 6
Xylenes, Total	12 / 89	2.9 - 2.9	1.6	2 / 12	100	0 / 12	500	0 / 12	1000	0 / 12

1 - SCG = standards, criteria and guidance values; 6 NYCRR Part 375
Surface soils represent samples collected from 0 - 2 feet bgs

Table 5.3: RI & SRI Site Subsurface Soil and Bedrock Summary of Statistics

Contaminants	Frequency of Detection	Range of Detected Concentrations	Protection of Groundwater	Frequency of Exceeding Protection of Groundwater	Residential SCG (1)	Frequency of Exceeding Residential SCG	Commercial SCG (1)	Frequency of Exceeding Commercial SCG	Industrial SCG (1)	Frequency of Exceeding Industrial SCG
Volatile Organics (mg/kg)										
1,1,1-Trichloroethane	14 / 127	0.0011 - 2.5	0.68	1 / 127	100	0 / 127	500	0 / 127	1000	0 / 127
Cis-1,2-Dichloroethene	33 / 127	0.0007 - 1100	0.25	18 / 127	59	6 / 127	500	1 / 127	1000	1 / 127
Tetrachloroethene	86 / 127	0.0008 - 21000	1.3	26 / 127	5.5	15 / 127	150	10 / 127	300	7 / 127
Trichloroethene	51 / 127	0.0006 - 1200	0.47	18 / 127	10	8 / 127	200	7 / 127	400	4 / 127
Vinyl chloride	15 / 127	0.015 - 36	0.02	13 / 127	0.21	10 / 127	13	1 / 127	27	1 / 127
1,1-Dichloroethane	7 / 127	0.0006 - 0.032	0.27	0 / 127	19	0 / 127	240	0 / 127	480	0 / 127
1,1-Dichloroethene	14 / 127	0.0085 - 0.22	0.33	0 / 127	100	0 / 127	500	0 / 127	1000	0 / 127
1,2-Dichlorobenzene	4 / 127	0.15 - 0.26	1.1	0 / 127	100	0 / 127	500	0 / 127	1000	0 / 127
1,4-Dichlorobenzene	8 / 127	0.034 - 0.78	1.8	0 / 127	9.8	0 / 127	130	0 / 127	250	0 / 127
Acetic acid, methyl ester	10 / 127	0.034 - 0.16	--	0 / 127	--	0 / 127	--	0 / 127	--	0 / 127
Acetone	4 / 99	0.0018 - 0.16	0.05	1 / 99	100	0 / 99	500	0 / 99	1000	0 / 99
Benzene	1 / 127	0.098 - 0.098	0.06	1 / 127	2.9	0 / 127	44	0 / 127	89	0 / 127
Carbon disulfide	1 / 127	0.0052 - 0.005	--	0 / 127	--	0 / 127	--	0 / 127	--	0 / 127
Chloroform	0 / 127	0 - 0	--	0 / 127	--	0 / 127	--	0 / 127	--	0 / 127
Cyclohexane	5 / 127	0.048 - 0.52	--	0 / 127	--	0 / 127	--	0 / 127	--	0 / 127
Ethyl benzene	16 / 127	0.1 - 93	1	10 / 127	30	3 / 127	390	0 / 127	780	0 / 127
Isopropylbenzene	11 / 127	0.077 - 1.1	--	0 / 127	--	0 / 127	--	0 / 127	--	0 / 127
Methyl cyclohexane	14 / 127	0.026 - 40	--	0 / 127	--	0 / 127	--	0 / 127	--	0 / 127
Methylene chloride	10 / 127	0.011 - 0.053	0.05	1 / 127	51	0 / 127	500	0 / 127	1000	0 / 127
Toluene	17 / 127	0.033 - 520	0.7	8 / 127	100	2 / 127	500	1 / 127	1000	0 / 127
trans-1,2-Dichloroethene	10 / 127	0.0093 - 0.41	0.19	3 / 127	100	0 / 127	500	0 / 127	1000	0 / 127
Xylene, o	2 / 71	0.13 - 0.62	1.6	0 / 71	100	0 / 71	500	0 / 71	1000	0 / 71
Xylenes (m&p)	2 / 71	0.33 - 1.3	1.6	0 / 71	100	0 / 71	500	0 / 71	1000	0 / 71
Xylenes, Total	19 / 127	0.092 - 360	1.6	10 / 127	100	5 / 127	500	0 / 127	1000	0 / 127
Semivolatile Organics (mg/kg)										
2-Methylnaphthalene	2 / 3	1.5 - 2.6	--	0 / 3	--	0 / 3	--	0 / 3	--	0 / 3
Acenaphthene	2 / 3	0.084 - 0.22	98	0 / 3	100	0 / 3	500	0 / 3	1000	0 / 3
Acenaphthylene	1 / 3	0.17 - 0.17	107	0 / 3	100	0 / 3	500	0 / 3	1000	0 / 3
Anthracene	2 / 3	0.081 - 0.19	1000	0 / 3	100	0 / 3	500	0 / 3	1000	0 / 3
Benzo(a)anthracene	2 / 3	0.17 - 0.35	1	0 / 3	1	0 / 3	5.6	0 / 3	11	0 / 3
Benzo(a)pyrene	2 / 3	0.11 - 0.21	22	0 / 3	1	0 / 3	1	0 / 3	1.1	0 / 3
Benzo(b)fluoranthene	2 / 3	0.16 - 0.32	1.7	0 / 3	1	0 / 3	5.6	0 / 3	11	0 / 3
Benzo(k)fluoranthene	1 / 3	0.18 - 0.18	1.7	0 / 3	1	0 / 3	56	0 / 3	110	0 / 3
Bis(2-Ethylhexyl)phthalate	2 / 3	0.4 - 1.2	--	0 / 3	--	0 / 3	--	0 / 3	--	0 / 3
Chrysene	2 / 3	0.18 - 0.42	1	0 / 3	1	0 / 3	56	0 / 3	110	0 / 3
Dibenzofuran	1 / 3	0.12 - 0.12	210	0 / 3	14	0 / 3	350	0 / 3	1000	0 / 3
Di-n-butylphthalate	2 / 3	0.088 - 0.11	--	0 / 3	--	0 / 3	--	0 / 3	--	0 / 3
Fluoranthene	2 / 3	0.46 - 1.1	1000	0 / 3	100	0 / 3	500	0 / 3	1000	0 / 3
Fluorene	3 / 3	0.13 - 1.4	386	0 / 3	100	0 / 3	500	0 / 3	1000	0 / 3

Table 5.3: RI & SRI Site Subsurface Soil and Bedrock Summary of Statistics

Contaminants	Frequency of Detection	Range of Detected Concentrations	Protection of Groundwater	Frequency of Exceeding Protection of Groundwater	Residential SCG (1)	Frequency of Exceeding Residential SCG	Commercial SCG (1)	Frequency of Exceeding Commercial SCG	Industrial SCG (1)	Frequency of Exceeding Industrial SCG
Semivolatile Organics (mg/kg)										
Naphthalene	2 / 3	0.77 - 1.1	12	0 / 3	100	0 / 3	500	0 / 3	1000	0 / 3
Phenanthrene	3 / 3	0.37 - 2	1000	0 / 3	100	0 / 3	500	0 / 3	1000	0 / 3
Pyrene	3 / 3	0.38 - 0.71	1000	0 / 3	100	0 / 3	500	0 / 3	1000	0 / 3
Total Metals (mg/kg)										
Arsenic	1 / 2	8 - 8	16	0 / 2	16	0 / 2	16	0 / 2	16	0 / 2
Barium	2 / 2	49.4 - 760	820	0 / 2	350	1 / 2	400	1 / 2	10000	0 / 2
Cadmium	2 / 2	0.25 - 37.8	7.5	1 / 2	2.5	1 / 2	9.3	1 / 2	60	0 / 2
Chromium	2 / 2	18.9 - 162	19	1 / 2	22	1 / 2	400	0 / 2	800	0 / 2
Lead	2 / 2	1.9 - 2580	450	1 / 2	400	1 / 2	1000	1 / 2	3900	0 / 2
Mercury	1 / 2	0.079 - 0.079	0.73	0 / 2	0.81	0 / 2	2.8	0 / 2	5.7	0 / 2
Selenium	1 / 2	1 - 1	4	0 / 2	36	0 / 2	1500	0 / 2	6800	0 / 2
Silver	2 / 2	0.94 - 10.7	8.3	1 / 2	36	0 / 2	1500	0 / 2	6800	0 / 2
TPH (mg/kg)										
Kerosene (C9-C22)	2 / 2	1600 - 2700	--	0 / 2	--	0 / 2	--	0 / 2	--	0 / 2
Total Petroleum Hydrocarbons	2 / 2	3100 - 4400	--	0 / 2	--	0 / 2	--	0 / 2	--	0 / 2

1 - SCG = standards, criteria and guidance values; 6 NYCRR Part 375
Subsurface soils represent samples collected greater than 2 feet bgs

Table 5.4: RI & SRI Railroad Subsurface Soil Summary of Statistics

Contaminants	Frequency of Detection	Range of Detected Concentrations	Protection of Groundwater	Frequency of Exceeding Protection of Groundwater	Residential SCG (1)	Frequency of Exceeding Residential SCG	Commercial SCG (1)	Frequency of Exceeding Commercial SCG	Industrial SCG (1)	Frequency of Exceeding Industrial SCG
Volatile Organics (mg/kg)										
1,1,1-Trichloroethane	8 / 117	0.049 - 0.049	0.68	1 / 8	100	0 / 8	500	0 / 8	1000	0 / 8
Cis-1,2-Dichloroethene	14 / 117	0.0014 - 0.0014	0.25	6 / 14	59	0 / 14	500	0 / 14	1000	0 / 14
Tetrachloroethene	90 / 117	0.0023 - 0.0023	1.3	41 / 90	5.5	28 / 90	150	4 / 90	300	1 / 90
Trichloroethene	30 / 117	0.0008 - 0.0008	0.47	10 / 30	10	1 / 30	200	0 / 30	400	0 / 30
1,1,2-Trichloroethane	1 / 117	0.3 - 0.3	--	0 / 1	--	0 / 1	--	0 / 1	--	0 / 1
4-Methyl-2-pentanone	1 / 117	0.74 - 0.74	--	0 / 1	--	0 / 1	--	0 / 1	--	0 / 1
Acetic acid, methyl ester	36 / 117	0.028 - 0.028	--	0 / 36	--	0 / 36	--	0 / 36	--	0 / 36
Acetone	4 / 106	0.007 - 0.007	0.05	2 / 4	100	0 / 4	500	0 / 4	1000	0 / 4
Bromoform	5 / 117	0.016 - 0.016	--	0 / 5	--	0 / 5	--	0 / 5	--	0 / 5
Chloroform	8 / 117	0.057 - 0.057	0.37	1 / 8	10	0 / 8	350	0 / 8	700	0 / 8
Ethyl benzene	2 / 117	0.025 - 0.025	1	0 / 2	30	0 / 2	390	0 / 2	780	0 / 2
Isopropylbenzene	1 / 117	0.072 - 0.072	--	0 / 1	--	0 / 1	--	0 / 1	--	0 / 1
Methyl cyclohexane	4 / 117	0.067 - 0.067	--	0 / 4	--	0 / 4	--	0 / 4	--	0 / 4
Methylene chloride	10 / 117	0.031 - 0.031	0.05	6 / 10	51	0 / 10	500	0 / 10	1000	0 / 10
Toluene	11 / 117	0.035 - 0.035	0.7	3 / 11	100	0 / 11	500	0 / 11	1000	0 / 11
Xylene, o	2 / 89	0.093 - 0.093	1.6	0 / 2	100	0 / 2	500	0 / 2	1000	0 / 2
Xylenes (m&p)	2 / 89	0.23 - 0.23	1.6	1 / 2	100	0 / 2	500	0 / 2	1000	0 / 2
Xylenes, Total	2 / 117	0.32 - 0.32	1.6	1 / 2	100	0 / 2	500	0 / 2	1000	0 / 2

1 - SCG = standards, criteria and guidance values; 6 NYCRR Part 375
Subsurface soils represent samples collected greater than 2 feet bgs

Table 5.5: RI & SRI Site Groundwater Summary of Statistics

Contaminants of Concern	Frequency of Detection	Range of Detected Concentrations	GW A	Frequency of Exceeding GW A
Volatile Organics (mg/L)				
1,1,1-Trichloroethane	30 / 83	0.0027 - 0.73	0.005	25 / 30
Cis-1,2-Dichloroethene	46 / 83	0.00093 - 52	0.005	34 / 46
Tetrachloroethene	78 / 83	0.001 - 170	0.005	69 / 78
Trichloroethene	69 / 83	0.0011 - 40	0.005	63 / 69
Vinyl chloride	9 / 82	0.00086 - 1.8	0.002	8 / 9
1,1,2-Trichloro-1,2,2-Trifluoroethane	1 / 81	0.0022 - 0.0022	0.005	0 / 1
1,1,2-Trichloroethane	6 / 83	0.00045 - 0.036	0.001	4 / 6
1,1-Dichloroethane	25 / 83	0.00055 - 0.16	0.005	16 / 25
1,1-Dichloroethene	30 / 83	0.00072 - 1.7	0.005	25 / 30
1,2-Dichloroethane	8 / 83	0.00025 - 0.014	0.0006	6 / 8
Acetone	3 / 62	0.002 - 0.004	--	0 / 3
Benzene	2 / 81	0.00057 - 0.0014	0.001	1 / 2
Bromodichloromethane	1 / 81	0.002 - 0.002	--	0 / 1
Carbon disulfide	2 / 81	0.00053 - 0.0024	--	0 / 2
Chloroethane	1 / 82	0.003 - 0.003	0.005	0 / 1
Chloroform	21 / 83	0.00063 - 0.025	0.007	1 / 21
Chloromethane	1 / 81	0.00065 - 0.00065	0.005	0 / 1
Cyclohexane	3 / 81	0.0022 - 0.037	--	0 / 3
Ethylbenzene	1 / 81	0.00059 - 0.00059	0.005	0 / 1
Isopropylbenzene	6 / 81	0.00053 - 0.009	0.005	2 / 6
Methyl cyclohexane	7 / 82	0.00021 - 0.045	--	0 / 7
Methyl Tertbutyl Ether	1 / 81	0.00021 - 0.00021	--	0 / 1
Methylene chloride	9 / 81	0.012 - 0.65	0.005	9 / 9
Toluene	3 / 81	0.0006 - 5	0.005	1 / 3
trans-1,2-Dichloroethene	4 / 82	0.0018 - 0.011	0.005	2 / 4
Xylenes (m&p)	1 / 37	0.0023 - 0.0023	0.005	0 / 1
Xylenes, Total	3 / 81	0.002 - 2.7	0.005	1 / 3
Total Metals (mg/L)				
Arsenic	1 / 6	0.0015 - 0.0015	0.025	0 / 1
Barium	6 / 6	0.168 - 0.339	1	0 / 6
Cadmium	1 / 6	0.0024 - 0.0024	0.005	0 / 1
Chromium	5 / 6	0.0007 - 0.0039	0.05	0 / 5
Iron	2 / 2	0.462 - 0.54	0.3	2 / 2
Lead	6 / 6	0.0042 - 0.0078	0.025	0 / 6
Manganese	2 / 2	0.9 - 1.67	0.3	2 / 2
Selenium	1 / 6	0.0017 - 0.0017	0.01	0 / 1
Silver	2 / 6	0.00065 - 0.00069	0.05	0 / 2
TPH (mg/L)				
Extractable Petroleum Hydrocarbons, Total	1 / 1	0.61 - 0.61	--	0 / 1

Notes: See Table 4A

Table 5.6: RI & SRI Railroad Groundwater Summary Statistics

Contaminants of Concern	Frequency of Detection	Range of Detected Concentrations	GA	Frequency of Exceeding GA
Volatile Organics (mg/L)				
1,1,1-Trichloroethane	1 / 24	0.00057 - 0.00057	0.005	0 / 1
Cis-1,2-Dichloroethene	14 / 24	0.00067 - 0.13	0.005	6 / 14
Tetrachloroethene	24 / 24	0.0017 - 3.6	0.005	20 / 24
Trichloroethene	16 / 24	0.0005 - 1.8	0.005	9 / 16
Acetone	1 / 19	0.011 - 0.011	--	0 / 1
Chloroform	3 / 24	0.00072 - 0.001	0.007	0 / 3
Chloromethane	1 / 24	0.00068 - 0.00068	0.005	0 / 1
trans-1,2-Dichloroethene	1 / 24	0.0036 - 0.0036	0.005	0 / 1
Xylene, o	1 / 17	0.00055 - 0.00055	0.005	0 / 1
Xylenes (m&p)	1 / 17	0.0011 - 0.0011	0.005	0 / 1
Xylenes, Total	1 / 24	0.0016 - 0.0016	0.005	0 / 1
Volatile Gases (mg/L)				
Carbon Dioxide	1 / 1	7.67 - 7.67	--	0 / 1
Total Metals (mg/L)				
Barium	4 / 4	0.148 - 0.299	1	0 / 4
Iron	1 / 1	0.0425 - 0.0425	0.3	0 / 1
Lead	4 / 4	0.0115 - 0.0159	0.025	0 / 4
Manganese	1 / 1	2.13 - 2.13	0.3	1 / 1
Silver	2 / 4	0.00065 - 0.0012	0.05	0 / 2

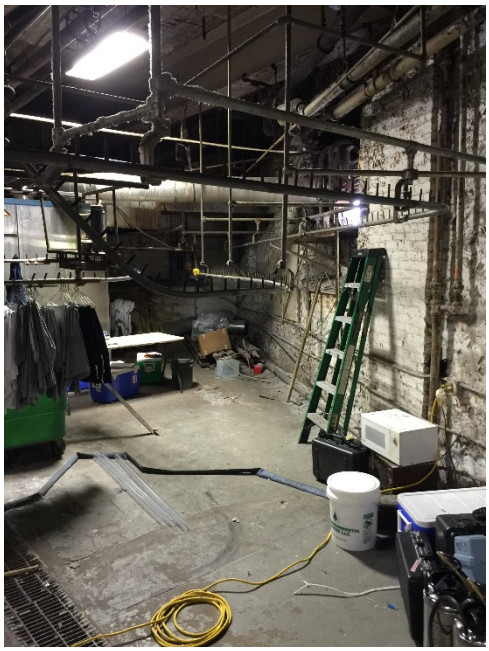
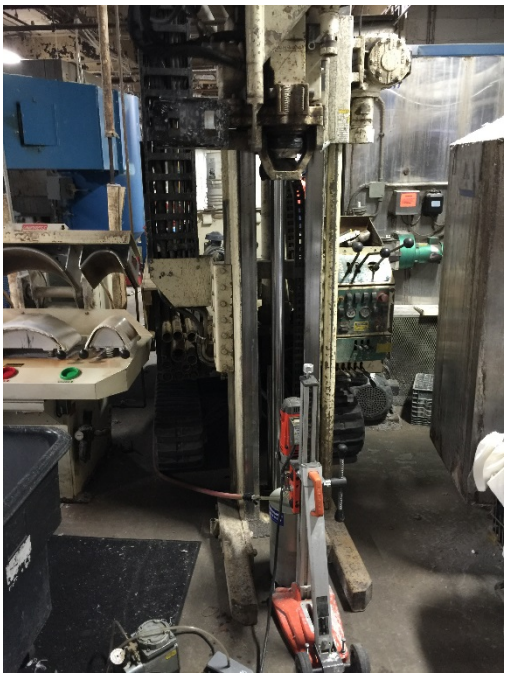
Notes: See Table 4A

APPENDIX A

SITE PHOTOGRAPHS

Appendix A – Drilling Activities

Client:	NYSDEC	***Project Number:***	36121112221.06.01
Site Name:	Industrial Overall Service	***Site Location:***	New Rochelle, New York.

Photographer: Brandon Shaw ***Date:*** October, 2015 ***Photograph:*** 1 ***Direction:*** NA ***Description:*** Location of Former Dry Cleaning Unit Inside Site Building.	
Photographer: Brandon Shaw ***Date:*** October, 2015 ***Photograph:*** 2 ***Direction:*** NA ***Description:*** Drilling GS-501 Inside Site Building	

Appendix A – Drilling Activities

Client:	NYSDEC	***Project Number:***	36121112221.06.01
Site Name:	Industrial Overall Service	***Site Location:***	New Rochelle, New York.

Photographer: Brandon Shaw ***Date:*** October, 2015 ***Photograph:*** 3 ***Direction:*** Southwest ***Description:*** Drilling GS-505/MW-505 East side of Site Building	
Photographer: Brandon Shaw ***Date:*** October, 2015 ***Photograph:*** 4 ***Direction:*** North ***Description:*** Drilling GS-505/MW-505 East side of Site Building	

Appendix A – Drilling Activities

Client:	NYSDEC	***Project Number:***	36121112221.06.01
Site Name:	Industrial Overall Service	***Site Location:***	New Rochelle, New York.

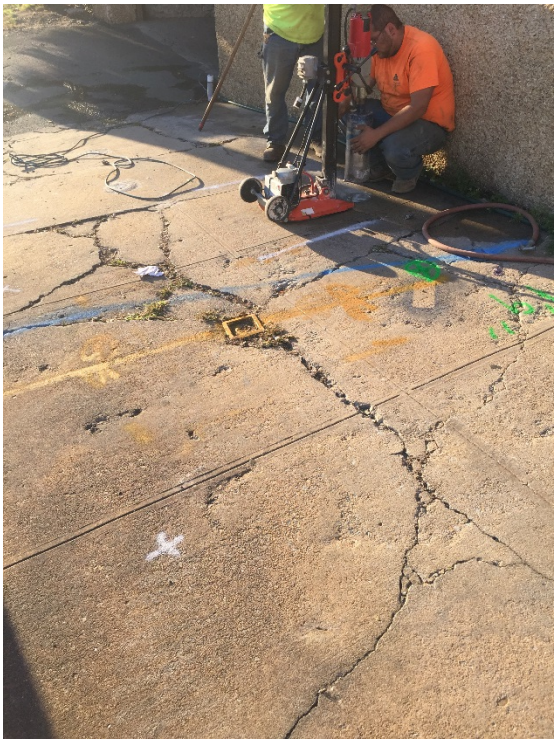
Photographer:
Brandon Shaw

Date:
October, 2015

Photograph: 5

Direction:
Northwest

Description:
Coring sidewalk on South Side of Site Building



Photographer:
Brandon Shaw

Date:
October, 2015

Photograph: 6

Direction:
East

Description:
Sanitary Sewer Bedding Sample Locations on South Side of the Site Building

Appendix A – Drilling Activities

Client:	NYSDEC	***Project Number:***	36121112221.06.01
Site Name:	Industrial Overall Service	***Site Location:***	New Rochelle, New York.

Photographer:
Nate Vogan

Date:
October, 2015

Photograph: 7

Direction:
Northeast

Description:
MetroNorth Property Soil Boring Locations

Photographer:
Brandon Shaw

Date:
October, 2015

Photograph: 8

Direction:
NA

Description:
Sludge in Drainage Channel in the Former Dry Cleaning Unit Investigation Area

Appendix A – Sanitary Sewer Inspection

Client: NYSDEC ***Project Number:*** 36121112221.06.01

Site Name: Industrial Overall Service ***Site Location:*** New Rochelle, New York.

Photographer: Nate Vogan ***Date:*** October, 2015 ***Photograph:*** 1 ***Direction:*** NA ***Description:*** Sludge Observed in Sanitary Sewer Line Exiting the Site	
Photographer: Nate Vogan ***Date:*** October, 2015 ***Photograph:*** 2 ***Direction:*** NA ***Description:*** Potential Lateral Observed (Left) Located Towards 21 Bartels Place	

Appendix A – Sanitary Sewer Inspection

Client:	NYSDEC	***Project Number:***	36121112221.06.01
Site Name:	Industrial Overall Service	***Site Location:***	New Rochelle, New York.

Photographer:
Nate Vogan

Date:
October, 2015

Photograph: 3

Direction:
NA

Description:
Manhole on Bartels Place (MH-01)

Observed Fibers on Walls

Photographer:
Nate Vogan

Date:
October, 2015

Photograph: 4

Direction:
NA

Description:
Manhole with Gray Water and No Sludge/Fibers at End of Columbus Ave

Appendix A – Sanitary Sewer Inspection

Client:	NYSDEC	***Project Number:***	36121112221.06.01
Site Name:	Industrial Overall Service	***Site Location:***	New Rochelle, New York.

Photographer: Nate Vogan ***Date:*** October, 2015 ***Photograph:*** 5 ***Direction:*** NA ***Description:*** Markout of Sanitary Sewer at Intersection of Pine St and Pine Ct	
Photographer: Nate Vogan ***Date:*** October, 2015 ***Photograph:*** 6 ***Direction:*** NA ***Description:*** Manhole (MH-04) on Pine Street	

Appendix A – Soil Vapor and Indoor Air Sampling

Client:	NYSDEC	***Project Number:***	36121112221.06.01
Site Name:	Industrial Overall Service	***Site Location:***	New Rochelle, New York.

Photographer:
NWV

Date:
October, 2015

Photograph: 1

Direction:
West

Description:
Installation of Soil Vapor Sampling Point

Near Manhole (MH-01) on Bartels Place

Photographer:

Date:
October, 2015

Photograph: 2

Direction:
NA

Description:
Soil Vapor Sampling Setup

Bartels Place

Appendix A – Soil Vapor and Indoor Air Sampling

Client:	NYSDEC	***Project Number:***	36121112221.06.01
Site Name:	Industrial Overall Service	***Site Location:***	New Rochelle, New York.

Photographer:
Nate Vogan

Date:
October, 2015

Photograph: 3

Direction:
Northwest

Description:
Storm Sewer Catch Basin on Pine Street

(SA-PS08-06)

Photographer:
Nate Vogan

Date:
October, 2015

Photograph: 4

Direction:
East

Description:
Soil Vapor Points Associated with Identified Sanitary Sewer Laterals

Bartels Place

Appendix A – Soil Vapor and Indoor Air Sampling

Client:	NYSDEC	***Project Number:***	36121112221.06.01
Site Name:	Industrial Overall Service	***Site Location:***	New Rochelle, New York.

Photographer:

Date: October, 2015

Photograph: 5

Direction: NA

Description: Indoor Air Sample Collection at Sewer Cleanout in Structure 1

Photographer:

Date: October, 2015

Photograph: 6

Direction: NA

Description: Indoor Air Sample Collection at Dranjer™ Cap in Structure 10

APPENDIX B

FIELD DATA RECORDS

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MS-501
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 1
Boring Location: INSIDE SITE BUILDING	Refusal Depth: 2.7' BGS	Total Depth: 2.8'	Bore Hole ~~ID~~/OD: 2.5"
Weather: 65°F, SUNNY	Soil Drilled: 2.7' BGS	Method: DIRECT PUSH	Casing Size: —
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MacroCore
Driller: BOB HAMMOND	Date Started: OCT. 17, 2015	Date Completed: Oct-17, 2015	Sampler ~~ID~~/OD: 2.5"
Rig Type/Model: ### 6610 DT	Logged By: BAS	Checked By: JR 11/3/15	
Reference Elevation:	Water Level: ≈ 1.5' BGS	Time: 1630	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0					40.1			0-0.4: CONCRETE/AGGREGATE CORE		← BUILDING FLOOR
								0.4-2.7: LT BROWN TO DK BROWN M/C SAND & GRAVEL; GRAVEL CONSISTENT W/ PARENT BR, WELL ~~GRADED~~, WET, NP		
1		2.3								
2	S1 @	1.8						DENSE;	SW	
3	1645							MACROCORE REFUSAL @ 2.7' BGS; = Bottom of boring @ 2.8' BGS		
4										
5										
	S2 @							DRY		
10										

NOTES: MONITORING BREATHING ZONE WHILE DRILLING INSIDE (VENTING EXHAUST OUTSIDE VIA PIPING):
CO: Ø H2S: 6
O2: 21.1 LEL: Ø

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: GS-502
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06	Client: NYSDEC	of: 1
Boring Location: INSIDE SITE BUILDING	Refusal Depth: 2.8' BGS	Total Depth: 2.8' BGS
Weather: 60°F, SUNNY	Soil Drilled: 2.8' BGS	Method: HAND TOOLS
Subcontractor: Aztech Technologies		Protection Level: D
Driller: BOB HAMMON	Date Started: OCT. 17, 2015	Date Completed: OCT 17, 2015
Rig Type/Model: ### GEOPROBE HANDTOOLS	Logged By: BAS	Checked By: BR 11/3/2015
Reference Elevation:	Water Level: > 2.8' BGS	Time: 1730

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0					NA			0-0.5' CONCRETE & AGGREGATE		← BUILDING FLOOR
1					0.0			0.5' : BROWN TO LT BROWN F/C SAND & GRAVEL, WELL GRADED, BRICK PRESENT @ 1.5', MOIST, NP, DENSE;	SW	
2	S1 @ 1720	NA						FILL ?		★ COLLECTED SOIL SAMPLE @ 2.1' BGS 20109-GS502003 @ 1720
3								REFUSAL @ 2.8' BGS W/ HANDTOOLS; LIKELY NOT BEDROCK		
4										
5										
10	S2 @									

NOTES: MONITORING BREATHING ZONE W/ 4-GAS METER:
O_2: 21.0 CO: 0
LEL: 0 H_2S: 4

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: MS-504
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06	Client: NYSDEC	of: 2
Boring Location: EASTERN SIDE OF SITE BUILDING	Refusal Depth: 18.2' BGS	Total Depth: 18.2'
Weather: 40°F, SUNNY	Soil Drilled: 14.8'	Method: DIRECT PUSH
Subcontractor: Aztech Technologies		Protection Level: D
Driller: BOB GRAMMON	Date Started: OCT. 18, 2015	Date Completed: OCT 18, 2015
Rig Type/Model: ### Geo 10 DT	Logged By: BAS	Checked By: 11/3/15
Reference Elevation:	Water Level: —	Time: —

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0					40.1			0-0.1 CONCRETE & AGGREGATE @ FLOOR		
					0.5			0.1-5 OLIVE BROWN F SAND w/ SILT & ~~w/~~		
1					3.9		+	FEW M/C SAND, TRACE GRAVEL, POORLY GRADED		COLLECTED SOIL VOC SAMPLE @ 1.2-1.5' BGS 360109-MS504001 @ 0845
	S1 @ 0845	5.0'/3.6'			4.3			SP, MDENSE, MOIST, Fill ?		
					5.9				SP/SM	
					4.8					
					8.9					
					10.9					
5					11.5		AR			COLLECTED SOIL VOC SAMPLE @ 4.8' BGS 360109-MS504005 @ 0850
					2.8			5-8.5 OLIVE BROWN F/M SAND w/ SOME SILT & TRACE GRAVEL, POORLY GRADED M DENSE,		
4					3.7			MOIST, SP, MORE GRAVEL @ ~8'	SP/SM	
7	S2 @ 0855	5.0'/4.1'			5.1			8.5-10 GREY/OLIVE GREY F SAND, FEW M SAND & GRAVEL, POORLY GRADED, DENSE, NP, MOIST		
					7.8					
					12.5				GP	
8					12.7		DUP			COLLECTED SOIL VOC SAMPLE @ 8' BGS 360109-MS504008 @ 0900
9					1.9					
					1.7				SP	
10					2.0					

NOTES: MONITORING BREATHING ZONE w/ 4-GAS METER (EXHAUST IS VENTED OUTSIDE)
LO: 0 LEL: 0
O2: 20.9 H2S: 0

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MS-574
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: SITE BUILDING (EAST)	Refusal Depth: 18.2' BGS	Total Depth: 18.2' BGS	Bore Hole ID/OD:
Weather: 40'F, SUNNY	Soil Drilled: 14.8' BGS	Method: DIRECT PUSH	Casing Size:
Subcontractor: Aztech Technologies		Protection Level: D	Sampler:
Driller: BOB HAMMON	Date Started: OCT. 18, 2015	Date Completed: OCT. 18, 2015	Sampler ID/OD:
Rig Type/Model: 6610DT	Logged By: BAS	Checked By: [signature] 11/3/15	
Reference Elevation:	Water Level:	Time:	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10					0.9			10-14.8 GREY TO LT GREYISH OLIVE, F/M SAND FEW C SAND, TRACE GRAVEL/SILT, POORLY GRADED, SP, VERY DENSE, MOIST/DRY, NO ODOR-	SP	
	S3 @ 0910	5.0'/3.4'			0.7			14.8-15 BLACK TO GREY TO WHITE WEATHERED BEDROCK, FRIABLE & ALMOST SOIL IN PROPERTIES;		
					0.3					
					0.3					
					0.2					
					0.1					
15					0.1					WEATHERED BEDROCK
					40.1			15-18.2 WEATHERED BEDROCK, SHIST, PROPERTIES OF A M SAND; WHITED BLACK TO GREENISH GREY TO IRON STAINED (~17.5-18) TO BE GREY, QUARTZ & MICA;		
16	S4 @ 0940	3.2'/3.2'								
17										
18										
								MACROCORE REFUSAL @ 18.2' BGS = Bottom of Boring		
20										

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: US-505
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location:	Refusal Depth: —	Total Depth: 26.5' BGS	Bore Hole ID/OD: 4-inch × 2.5 inch
Weather: 50°F, CLOUDY/BREEZY	Soil Drilled: 15.5 BGS	Method: DIRECT PUSH	Casing Size: 4" (~12.2')
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MacroCore
Driller: BOB HAMMOND	Date Started: OCT. 18, 2015	Date Completed: Oct 21, 2015	Sampler OD: 2.5 inch
Rig Type/Model: ### 66100T	Logged By: BAS	Checked By: [signature] 11/3/15	
Reference Elevation:	Water Level: —	Time: —	

Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)		Sample Description and Classification	USCS Group Symbol	Remarks
0.0				NA		0-0.5' CONCRETE & AGGREGATE SIDEWALK. 0.5-2.5: BROWN SAND & GRAVEL w/ BRICKS & ASPHALT → HAND CLEARED TO 2.5' bgs	[hatched] SP/GP/Fill	
2.5	S1 @ 1250	2.5' / 2.3		NA ↓		2.5-5 BROWN TO GRAYISH BROWN M SAND & GRAVEL, FEW F/C SAND; COBBLE @ 3.5'. POORLY GRADED, DENSE, NP, MOIST TO DRY	SP	
				3.7				
				30.5				COLLECTED SOIL SAMPLE @ US-505 @ 3.2-3.5' bgs
				~~5.0~~ 50.7	(*)		GP	360109-US505003 @ 1255
				NA			SP	
				33.6				
5				38.5				
				37.5		5-10 BROWN TO OLIVE BROWN F/C SAND, SOME GRAVEL, MOIST, POORLY GRADED, DENSE, NO ODOR, MORE SILT FROM 9-10' bgs	SP	
				30.5				
	S2 @ 1300	5.0 / 4.8		42.7				
				50.5				
				43.4				COLLECTED SOIL VOC SAMPLE @ US-505 @ 9' bgs
				53.7				360109-US505109
				60.5	(*)			@1305
10				38.5			SP/SM	

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MW-505
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: EASTERN SIDE OF SITE BUILDING	Refusal Depth: —	Total Depth: 26.5' BGS	Bore Hole ID/OD: 4-INCH & 2.5 INCH
Weather: 55°F, SUNNY / WINDY	Soil Drilled: 15.5'	Method: DIRECT PUSH	Casing Size: 4-INCH (~12.2' bgs)
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: BOB HAMMON	Date Started: OCT 18, 2015	Date Completed: 10/21/15	Sampler ID/OD: 2.5-INCH
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: 11/3/15	
Reference Elevation:	Water Level: —	Time: —	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
10					30.5			10-12.8' · OLIVE BROWN SILTY F SAND, SOME M/C SAND, FEW GRAVEL, MOIST, NP, NO ODOR;		
11	S3 @ 13'15	2.8'/2.7'			38.6			MEDENSE TO DENSE;	SP/SM	
12					41.5					
					63.2					
					70.2					COLLECTED SOIL VOC SAMPLE @ 12' BGS 360104-MS505012 @ 1325
					75.3		⊗	MACROCORE REFUSAL @ 12.8' BGS; ADVANCING 4 1/4-INCH AUGERS DOWN TO BEDROCK & THEN WILL SET UP TO CORE INTO ROCK 5';		
								OCT. 20, 2015 → AUGERED (4 1/4-INCH ID) TO BEDROCK (REFUSAL) @ 12.3' BGS; BEGINNING TO ROLLERBIT ~5' TO CONFIRM BEDROCK & SET HYBRID WELL		
15										
								OCT 21, 2015: CORED THROUGH 1' BOULDER FROM 12.5-13.5' BGS; → WAS NOT ABLE TO ADVANCE CASING THROUGH BOULDER → ROLLERBIT TO ~26.5'; • ENCOUNTERED WEATHERED BEDROCK FROM 15.5' TO 26.5' BGS • AZTECH HAS NO MORE RODS FOR ADVANCING ROLLERBIT, SO ATTEMPTING TO INSTALL MONITORING WELL IN OPEN BORING • DID NOT ENCOUNTER 'COMPETENT' OR 'HARDER' BEDROCK.		CORE RUN TIMES: N/A
20										
20 24.5								→ Bottom of boring = 26.5' - No refusal		

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: GS-506
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: SOUTH END OF SITE BUILDING	Refusal Depth: 19.0' BGS	Total Depth: 19.0' BGS	Bore Hole ID/OD: 2.5-INCH
Weather: 60°F, SUNNY	Soil Drilled: 19.0' BGS	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT. 21, 2015	Date Completed: 10/21/2015	Sampler ID/OD: 2.5-INCH
Rig Type/Model: ### 6610 DT	Logged By: BAS	Checked By: 11/3/15	
Reference Elevation:	Water Level: 11.5' BGS	Time: 0900	

Sample Information					Monitoring					
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
					2.1			0-0.3 CONCRETE/AGGREGATE → SIDEWALK		
1								0.3-0.8 ASPHALT, BRICK, BACKFILL	SW/F, II	
2		5.0 / 4.0						0.8-3 BROWN TO OLIVE BROWN SILTY F SAND, FEW GRAVEL, DENSE, WELL GRADED, SP, MOIST		
3	S1 @ 1150						(*)	3-5 BROWN F/M SAND, FEW GRAVEL, TRACE SILT, DRY, M DENSE, NO ODOR		(*) RECOVERED SOIL SAMPLE @ 3.2' BGS GS-506 NOMINAL BOTTOM DEPTH OF SEWER LINE
4									SP/F, II	PB0109-GS-506003 @ 1150
5										
					2.0.1			5-6 OLIVE BROWN F/C SAND & GRAVEL, WELL GRADED, MOIST, SP, M DENSE	SW/F, II	
								6-6.5 ASPHALT & CONCRETE → FILL		
	S2 @ 0815	5.0' / 5.0'						6.5-8.5 OLIVE BROWN F/M SAND, FEW C SAND, TRACE SILT & F GRAVEL, MOIST, NP, POORLY GRADED	NA	
								8.5-9 COBBLE, WEATHERED BEDROCK FRAGMENT	SP	
								9-10 OLIVE BROWN FINE SAND W/ SOME SILT, SP, POORLY GRADED, DENSE, MOIST, VERY FAINT ODOR		
10									SM	

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MS-506
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: SOUTH OF SITE BUILDING	Refusal Depth: 19.0'	Total Depth: 19.0'	Bore Hole ID/OD: 2.5-INCH
Weather: 60°F, SUNNY	Soil Drilled: 19.0'	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT 21, 2015	Date Completed: OCT 21, 2015	Sampler ID/OD: 2.5-INCH
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: JRunkiffg 11/3/15	
Reference Elevation:	Water Level: ~11.5' bgs	Time: 0900	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10					479.5		(1)	10-15 IRRIDESCENT TO SILVER TO OLIVE TO ~~OLIVEISH BROWN~~ F/M SAND, FEW GRAVEL & TRACE SILT, POORLY GRADED, MOIST, VERY STRONG ODOR, SP, DENSE TO MDENSE		
					463.2					COLLECTED SOIL VOC SAMPLE @ MS-506 10.8-11.2' bgs 360109-MS506011 & 360109-MS506011D @ 1430
	S3 @ 0825	5.0 / 2.2			402				SP	
					369					
					332					
15					198.5					
					862.		(2)	15-15.8 IRRIDESCENT TO OLIVE F SAND, POORLY GRADED, MOIST, VERY STRONG ODOR, NP, DENSE	SP	
					432			15.8-19 BROWN TO OLIVE BROWN F/M SAND, FEW GRAVEL, MOIST TO WET, NP, MDENSE TO DENSE, WEATHERED BEDROCK @ 17.9' POORLY GRADED		COLLECTED SOIL VOC SAMPLE @ MS-506 15.5-15.7' bgs 360109-MS506016 @ 1545
	S4 @ 0845	4.0 / 5.0 / 3.9			185					
					101					
					89.1				SP	
					33.5					
					22.5					
					4.0					
								MACROCORE REFUSAL @ 19' bgs = Bottom of boring		
20										

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: GS-507
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: S OF SITE BUILDING	Refusal Depth: NA	Total Depth: 20'	Bore Hole ID/OD: 2.5-INCH
Weather: 62'F, SUNNY	Soil Drilled: 20'	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT 21, 2015	Date Completed: OCT 21, 2015	Sampler ID/OD: 2.5-INCH
Rig Type/Model: ### GEO DT	Logged By: BAS	Checked By: JRawl 11/3/15	
Reference Elevation:	Water Level: ~9' BMS	Time: 1030	

Sample Information: Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	Monitoring: PID Headspace Reading (ppm)	Sample Description and Classification	USCS Group Symbol	Remarks
0.0			10.1	0-0.3' - CONCRETE & AGGREGATE → SIDEWALK 0.3-0.5 ASPHALT & BRICK		
	S1 @ 0950	5.0 / 3.7	0.2 0.3	0.5-2.5 OLIVE TO REDDISH BROWN F SILTY SAND, TRACE GRAVEL, MOIST, SP/MP, DENSE, 2.5-5 BROWN TO REDDISH BROWN F/M SAND SOME F GRAVEL, POORLY GRADED, MOIST TO DRY NP, COMPACT TO LOOSE, NP	SM / SP / SP	F, I, I COLLECTED SOIL SAMPLE NEAR BOTTOM OF SEWER LINE 2.5'-3.0' BGS 360109-GS507-02 0955 F, I
5						
	S2 @ 1000		0.5 0.9 3.5 7.8 7.8 UNK (X)	5-6 : SAME AS 2.5-5 6-6.5 CONCRETE & ASPHALT 6.5-9 BROWN TO OLIVE BROWN M SAND, POORLY GRADED, MOIST, NP, COMPACT, FAINT ODOR 9-10 GREYISH OLIVE, F SAND, FEW SILT, POORLY GRADED, MOIST, COMPACT, NP ODOR	SP / SP / SP	F, I, I COLLECTED SOIL VOC SAMPLE @ 9.2-9.6' BGS (TOP OF CONT.) 360109-GS507-09 1000
10						

NOTES: (X) PID NOT WORKING CORRECTLY

BAS

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: GS-507
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: S OF SITE BUILDING	Refusal Depth: N/A	Total Depth: 20'	Bore Hole ID/OD: 2.5-INCH
Weather: 70°F, SUNNY	Soil Drilled: 20	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT 21, 2015	Date Completed: OCT 21, 2015	Sampler ID/OD: 2.5-INCH
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: J Rudloff 11/3/15	
Reference Elevation:	Water Level: ~9' BGS	Time: 1030	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10					325			10-14.5 GREYISH OLIVE TO IRA DECENT F/C SAND OF LITTLE GRAVEL, POORLY GRADED, MOIST, VERY STRONG ODOR, NP, COMPACT.	SP	
					281					
	S3	5.0			352					
12	@	/			421			14.5-15 OLIVE BROWN F/M SAND, COMPACT TO DENSE, MOIST, NP		COLLECTED SOIL VOC SAMPLE @ GS-507 12.2-12.5' BGS 360109-65507012 @1015
	1010	4.1			139					
					149					
					63.5					
15					47.5				SP	
					55.1			15-20 BROWN TO REDDISH BROWN F/M SAND, FEW SILT, SOME FGRAVEL, COBBLE (QUARTZ) @ 18.5' BGS, POORLY GRADED, MOIST TO WET, NP, DENSE		
					39.7					
					22.5					
	S4	5.0			8.9				SP	
	@	/			4.6					
	1030	4.7			3.7					
					1.8					
					0.7					
					0.8					
20					0.8			Bottom of boring = 20'6S - No Refusal		

NOTES:

RAY

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MS-508
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: S OF SITE BUILDING	Refusal Depth: 16.8' BGS	Total Depth: 16.8' BGS	Bore Hole ID/OD: 2.5-INCH
Weather: 70°F, SUNNY	Soil Drilled: 16.8' BGS	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT 21, 2015	Date Completed: OCT 21, 2015	Sampler ID/OD: 2.5 INCH
Rig Type/Model: ### 6610 DT	Logged By: BAS	Checked By: JHamilton 11/3/15	
Reference Elevation:	Water Level: ~11' BGS	Time: 1130	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0					20.1			0-0.3' CONCRETE SIDEWALK 0.3-0.4 ASPHALT & BRICK		
	S1 @ 1055	5.0' / 3.7			0.3 0.4 0.5			0.4-2.5 REDDISH BROWN ~~FSAN~~ SILTY F SAND, POORLY GRADED, SP, MOIST, COMPACT 2.5-5 BROWN TO REDDISH BROWN, M SAND FEW FSAND & F GRAVEL, POORLY GRADED MOIST, COMPACT TO LOOSE, NP	SM/FILL SP/FILL	
5										
	S2 @ 1040	5.0 / 5.0			0.3 0.4 0.1 0.2 0.1			5-6 SAME AS 2.5-5 6-6.6 CONCRETE & ASPHALT 6.6-9.5 BROWN TO OLIVE BROWN F/C SAND W/ LITTLE GRAVEL, WELL GRADED, COMPACT MOIST, NP 9.5-10 OLIVE BROWN F/M SAND W/ SOME SILT & FEW GRAVEL, MOIST, M DENSE, NP/SP, FAINT ODOR	SP/FILL SW	
10					0.2				SP	

NOTES:
~7' SOUTH OF MS-506

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MS-568
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: ~7' SOUTH of MS-566	Refusal Depth: 16.8' BGS	Total Depth: 16.8' BGS	Bore Hole ID/OD: 2.5-INCH
Weather: 70°F, SUNNY	Soil Drilled: 16.8' BGS	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT 21, 2015	Date Completed: OCT 21, 2015	Sampler ID/OD: 2.5-INCH
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: JRuffo 11/3/15	
Reference Elevation:	Water Level: ~11' BGS	Time: 1130	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
10					1.9			10-13.5 BROWN TO OLIVE BROWN TO TAN F/C SAND & SOME GRAVEL, COBBLES @ 11', WELL GRADED, NP, MOIST, MDENSE TO COMPACT, V. FAINT ODOR @ ~13'	SW	
					2.2					
					1.7					
	S3 @ 1050	5.0/4.9			3.7					COLLECTED SOIL VOC SAMPLE @ MS-568 @ 8.2' BGS 760107-45508613 @ 1055
					8.9		(*)	13.5-15 BROWN TO OLIVE BROWN F SAND FEW M/C SAND, SOME GRAVEL, POORLY GRADED, MOIST, DENSE,		
					0.8					
					0.9					
					0.5				Sp	
15					0.7					
					0.1			15-16.8 BROWN TO OLIVE BROWN SAT SILTY SAND, FEW GRAVEL, POORLY GRADED, WET, LOOSE, NO ODOR		
					0.2				Sp	
16.8	S4 @ 1055	1.8/5.0			0.1					
								Bottom of boring = 16.8' BGS Refusal with Direct Push		
20										

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: SS-301
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06	Client: NYSDEC	of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0
Weather: 70° Mclowny	Soil Drilled: 15.0	Method: Direct Push
Subcontractor: Aztech Technologies		Protection Level: D
Driller: Rey	Date Started: 10/22/15	Date Completed: 10/23/15
Rig Type/Model: ### 6610	Logged By: (MW) ~~BAS~~ NW	Checked By: JPP 12/7/15
Reference Elevation:	Water Level: NM	Time: NA

Sample Information				Monitoring		Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)				
0.0		5.0/ 0.9		0.0		Brownish black to moderate brown; poorly graded sand w/ gravel; trace 1" angular crushed stone + coal fragments; moist dense; no staining, no odors	Fill	
5	S1 @							
		5.0/ 2.0		0.0		Moderate brown; poorly graded sand; trace mc subrounded gravel; moist; medium dense	SP	Sample at 6.0 (Dup taken) 360109-SS- 301006 → @1240 301006D → @1240
10	S1 S2 @							

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: SS-301
Project Location: New Rochelle, New York		Page No. 2
Project No.: 3612112221.06	Client: NYSDEC	of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0
Weather: 70° Mcloudy	Soil Drilled: 15.0	Method: Direct Push
Subcontractor: Aztech Technologies		Protection Level: D
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15
Rig Type/Model: 6610	Logged By: MW ~~BAS~~ NW	Checked By: JPP 12/7/15
Reference Elevation:	Water Level: NM	Time: NA
		Bore Hole ID/(OD): 2.25
		Casing Size: NA
		Sampler: 5' Macrocore
		Sampler ID/OD: 1.5/2.25

Sample Information				Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10									
	SS-301 @ 10.0	5.0 / 2.9					~~WC~~ moderate brown; well graded sand, little to trace fm rounded gravel; trace silt; moist to wet; dense; no odors, no staining	~~SM~~ SM	Samples at 10.0 and 12.0 ① 360109-SS-301011 @ 1242 ② 360109-SS-301012 @ 1245
	SS-302 @ 12.0								
15									
							EoB at 15.0 ft bgs • Install 1" PVC w/ screen (0.010") to collect grab water sample - screen: 5-15 ft bgs		
20									

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-400
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/OD: 2.25
Weather: 68° Mcbudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Roy	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: ### 6610 DT	Logged By: ~~MDBAS~~ NMV	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0		5.0/ 0.8			0.0			Brownish black; poorly graded sand w/ gravel (fm angular); little large 1" crushed stone; moist, dense; no staining, no odor	Fill	Sample at 0-3 360109-SS-400000 @ 12:18
	S1 @ 1218									
5		5.0/ 0.3			0.0			Poor recovery; poorly graded sand; moderate brown; trace silt; moist, dense, no odors, no staining	SP	Sample at 5.1 360109-SS-400005 @ 12:21
	S2 @ 1221									
10										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-400
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/OD: 2.25
Weather: 68° Mclowy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Pat	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610	Logged By: ~~BAS~~ MW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
10		50/31			0.0			10-10.3 SAA 10.3-13.1 moderate brown w/ some grayish brown; well graded sand w/ gravel (f, rounded); trace gravel + silt; moist to wet; dense, no staining, no odor	SP SW-SM	Sample at 12.0 360109-SS-400012 @ 1225
	SS @ 1225									
15										
20								EOB at 15.0 ft bgs JPP		

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-401
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/(OD) 2.25
Weather: 68° M cloudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: ### 6610DT	Logged By: (NV) ~~DAS~~ NW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information				Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0									
		5.0/ 1.0		0.0			Brownish black; poorly graded sand w/ gravel; little crushed stone; trace coal fragments; moist; medium to dense; no staining, no odor	FILL	Soil sample at 0.4 360109-SS-401000 @ 11:00
	S1 @ 1100								
5									
		5.0/ 0.9		0.0			~~5-5.1 SAA (sluff)~~ (NV) sluff 5.1-5.9 Poorly graded sand w/ gravel; moderate brown; little large 1" diameter gravel; moist; dense; no staining, no odor	Fill SP	Soil sample at 5.5 360109-SS-401006 @ 12:05
	S2 @ 1205								
10									

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-401
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/OD: 2.25
Weather: 68° Mclowy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5/2.25
Rig Type/Model: 6610	Logged By: ~~BAS~~ MW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10										
		5.0 / 3.5			0.0			Grayish brown to moderate brown; well graded sand w/ silt, little to trace f rounded gravel; moist; dense; no staining, no odor	SW-SM	Soil sample at 10.7 360109-SS-401011 @ 12:10
	SS @ 1210									
15										
								EOB at 15.0 ft bgs JPP		
20										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: SS-402
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06	Client: NYSDEC	of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0
Weather: 66° Mclouty	Soil Drilled: 15.0	Method: Direct Push
Subcontractor: Aztech Technologies		Protection Level: D
Driller: Roy	Date Started: 10/22/15	Date Completed: 10/22/15
Rig Type/Model: ### 6610DT	Logged By: ~~BAS~~ NW	Checked By: JPP 12/7/15
Reference Elevation:	Water Level: NM	Time: NA
		Bore Hole ID/(OD) 2-25
		Casing Size: NA
		Sampler: 5' Macrocore
		Sampler ID/OD: 1.5 / 2.25

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0		5.0/ 1.3						Brownish black; poorly graded Sand w/ gravel; little fine gravel; trace coal fragments + crushed rock; moist, med dense; no staining, no odor	Fill	soil sample at 1.0 360109-SS-402000 @ 11:35
5	S1 @ 1135									
		5.0/ 1.3						5-5.4 SAND (possible fill) 5.4-6.8 moderate brown; poorly graded Sand w/ gravel; little to some fine subrounded gravel; moist, dense; no staining, no odor	Fill / SP	soil sample at 6.0 360109-SS-402006 @ 11:40
10	S2 @ 1140									

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-402
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/(OD) 2.25
Weather: 66° Mcloudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610	Logged By: ~~BAS~~ MV	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10										
	SS C 1145	5.0 / 4.1						10-11.4 SAA 11.4-14.1 grayish brown; well graded sand w/ silt; little to trace f rounded gravel; trace organics; wet; dense; no odors, no stains,	SP SW-SM	Soil Sample at 11.2 360109-SS-402011 @ 11:45
15										
								EOB at 15.0 ft bgs JPP		
20										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-403
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/(OD) 2.25
Weather: 65° Mcloudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macro core
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5/2.25"
Rig Type/Model: ### 66DT	Logged By: ~~BAS~~ NW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0										
		5.0/ 2.0			0.0			grayish black to brownish black; poorly graded sand w/ gravel; little crushed run stone + coal fragments; moist; medium dense, no odor — no staining	Fill	sample at 1.6 ft bgs 360109-SS-403000 @ 11:10
	S1 @ 1110									
5										
		5.0/ 1.6			0.0			medium brown; poorly graded sand w/ gravel; little to trace fm rounded gravel; moist; dense; no staining, no odor	SP	Sample at 5.6 360109-SS-403006 @ 11:15
	S2 @ 1115									
10										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-403
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/OD: 2.25
Weather: 65° Mclouds	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Roy	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610	Logged By: ~~BAS~~ JW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information				Monitoring		Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)				
10		5.0 / 3.2		0.0		10-10.6 SAA 10.6-13.2 grayish brown; well graded Sand w/ silt; trace f rounded gravel + organics; wet; dense; no staining no odor	SP / SW-SM	Soil sample at 12.0 MS/MD Taken 360109-SS-403012 (MS/MD) @11:20
15	SS @ 1120							
20						EOB at 15 ft bgs JPP		

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-404
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/(OD) 2.25
Weather: 65° Mclowny	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: ~~2.5~~ 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: ### 6610DT	Logged By: ~~BAS~~ MW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring						
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0										
		5.0 / 1.3			0.0			0-0.7 Crusher run 0.7-1.3 brownish black; poorly graded Sand w/ gravel; little to trace coal fragments; trace glass; dry to moist; med. dense; no staining, no odors	Stone / FILL	Soil sample taken at 0.9 360109-SS-404000 @ 10:45
	S1 @ 1045									
5										
		5.0 / 1.8			0.0			Medium brown; poorly graded sand w/ gravel (fm); little to trace C gravel (subrounded); moist; dense; no staining no odors	SP	Soil sample at 6.3 360109-SS-404006 @ 10:50
	S2 @ 1050									
10										

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-404
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/OD: 2.25
Weather: 65° M cloudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information				Monitoring		Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)				
10								
		5.0 / 3.5		0.0		10-11.9 SAA 11.9-13.5 greyish brown; well graded sand w/ silt; trace f rounded gravel & organics; wet to moist; med. dense; no staining; no odors	SP SW-SM	Sample at 10.5' 360109-SS-404011 @10:55
	SS @ 1055							
15								
						EOB at 15.0 ft bgs		
						JPP		
20								

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-405
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: 12.5	Total Depth: 12.5	Bore Hole ID/OD: 2.25
Weather: 63° M cloudy	Soil Drilled: 12.5	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: ### 66k DT	Logged By: ~~BAS~~ MW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0										
	S1 @ 1025	5.0 / 1.9			0.0			Brownish black; poorly graded sand w/ gravel; little to some fine gravel; little coal fragments; moist to dry; dense; no staining no odor	Fill (SP)	soil sample at 1.3 360109-SS-405000 @ 10:25
5										
	S2 @ 1030	5.0 / 3.5			0.0			5-5.3 SAA 5.3-8.5 Moderate brown; poorly graded sand w/ gravel; little fn gravel (subrounded); trace c rounded gravel; moist; wet at 7.5; medium dense; no staining, no odor	SP	soil sample at 7.5 360109-SS-405008 @ 10:30
10										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-405
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: 12.5	Total Depth: ~~15.0~~ 12.5	Bore Hole ID/OD: 2.25
Weather: 63° M Cloudy	Soil Drilled: 12.5	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610 DT	Logged By: ~~BAS~~ NM	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10		5/2.5			0.0			10 - 11.3 SAA 11.3 - 12.5 grayish brown; well graded sand w/ silt; little to trace f rounded gravel; wet; medium dense; no staining; no odor	SP SW-SM	soil sample at 11.5 Saturated zone 360109-SS-405012 @ 10:35
15	SS @ 1035									
20								Refusal at 12.5 ft bgs EOB JPP		

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-406
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 1
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15-0	Bore Hole ID/OD: 2.25
Weather: 56° M Cloudy	Soil Drilled: 15-0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 4.5 / 2.25
Rig Type/Model: ### 6610 DT	Logged By: ~~BAS~~ NMU	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0										
	S1 @ 0955	5.0/ 1.2			0.0			Poor recovery; brownish black; poorly graded sand w/ gravel; Fill; some fine angular gravel; trace coal fragments; dry to moist, dense; no staining, no odor	Fill (SP)	Sample taken at 0.8 ft Sandy Lense 360109-SS406000 @09:55
5										
	S2 @ 1000	5.0/ 2.0			0.0			Moderate brown to light yellowish brown; poorly graded sand w/ gravel; SP; some to little fine subrounded gravel; moist; dense; no staining; no odor	SP	Sample taken at 5.8 ft 360109-SS-406006 @ 10:00
10										
	S3 @ 1010	5.0/ 3.7			0.0			10-11.1 SAA, becoming wet at 10.5 11.1 - 12.7 grayish brown to light brown; well graded sand w/ silt; some silt; trace clay; moist to wet; dense; no staining, no odor EOB at 15.0 ft bgs JPP	SP Sm-Sm	Sample taken at 10.6 Sat. Sandy Zone 360109-SS-406011 @ 10:10
15										
40										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-407
Project Location: New Rochelle, New York			Page No. (MW2) 1
Project No.: 3612112221.06	Client: NYSDEC		of: 1
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/(OD): 2.25
Weather: 56° ; m cloudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610	Logged By: ~~BAS~~ MW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0 ~~10~~										
	S1 @ 0925	5.0 / 2.0			0.0			0-0.8 grayish brown; poorly graded sand w/ gravel (Fill); some to little fine angular gravel; trace silt; dense; moist; no staining no odor 0.8 - 1.7 brownish black; poorly graded sand w/ gravel (Fill); some coal fragments; little fine gravel; trace silt; moist to dry; med dense; no staining, no odor 1.7-2.0 moderate brown; poorly graded sand; SP; little f gravel; moist; dense; no staining no odor	Fill SP	Soil sample at 1.0 360109-SS-407000 @ 09:25
05 ~~15~~										
	S2 @ 0935	5.0 / 2.9			0.0			Moderate brown; poorly graded sand; SP; little fine subrounded to rounded gravel; moist; dense; no staining; no odor	SP	Soil sample collected at 6.0 Take field dup 360109-SS-407006D @ 09:35
10										
	S3 @ 0945	5.0 / 2.6			0.0			10-11.7 SAA, becoming wet at 11.1 11.7 -12.6 brownish gray to light gray; well graded sand w/ silt; some silt; trace f gravel; moist to wet; soft; no staining, no odor	SP SW-SM	Soil sample collected at 11.7 @ 09:45 top of fines 360109-SS-407017
15 ~~20~~										

NOTES:

EOB at 15.0 ft bgs

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: SS-408
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06 act	Client: NYSDEC	of: 1
Boring Location: Metro North	Refusal Depth: NA	Total Depth: 15.0
Weather: 55° M Cloudy	Soil Drilled: 15.0	Method: Direct Push
Subcontractor: Aztech Technologies		Protection Level: D
Driller: Roy	Date Started: 10/22/15	Date Completed: 10/22/15
Rig Type/Model: ### 6610DT	Logged By: ~~BAS~~ NW	Checked By: JPP 12/7/15
Reference Elevation:	Water Level: NM	Time: NA

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0					0.0			Dusky brown to moderate brown; poorly graded sand; SP; moist; some fine gravel; little to trace coal fragments; no odor; medium dense	SP	collected soil sample at 1.2 360109-SS-408000 (sandy zone) @08:50
		5.0/1.8								
	S1 @ 0850									
5										
		5.0/1.5			0.0			5.0-5.8 SAA 5.8-7.5 Moderate brown; poorly graded (enf) sand; moist; trace f gravel; dense; no odor; no staining	SP	collected soil sample at 6.6 360109-SS-408007 @08:55
	S2 @ 0855									
10										
		5.0/3.2			0.0			10-11.5 SAA 11.5-12.2 grayish brown; well graded f sand; moist; some silt; little organics soft; no odor, no staining 12.2-15.0 light organgish brown; well graded f sand, moist; some silt; trace rounded 1" gravel; no odor; no staining, soft	SP SW-SM SW-SM	collected soil sample at 11.2 @09:15 Sat. Zone 360109-SS-408011 @
	S3 @ 0915									
X 15										

NOTES:

EOB at 15.0 ft bgs

install PVC w/ screen 5-15ft to take grab water

SOIL BORING LOG Sample

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: US-500
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06.10 1	Client: NYSDEC	of: 1
Boring Location: INSIDE SITE BUILDING	Refusal Depth: 7.8'	Total Depth: 7.8'	Bore Hole ID/OD: 2.25
Weather: 65F SUNNY	Soil Drilled: 7.8'	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACRO CORE
Driller: BOB HAMMOND	Date Started: OCT. 17, 2015	Date Completed: OCT 17, 2015	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: ### GEO DT	Logged By: BAS	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information: Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	Monitoring: PID Headspace Reading (ppm)		Sample Description and Classification	USCS Group Symbol	Remarks
0.0			10.1		0-0.4' CONCRETE & AGGREGATE (CINDERS/COAL/ASH & SLAG);		← SITE BUILDING FLOOR
					0.4-5' LT BROWN TO OLIVE BROWN F/M SAND, SOME/FEW GRAVEL (FINE) CONSISTING OF QUARTZITE/BIOTITE @ THE WEATHERED PARENT BR (SCHIST), POORLY GRADED, MOIST, NP/SP, MODERSE,	SP	
	S1 @ 1440	5.0 / 2.9		A			COLLECTED SOIL SAMPLE @ 3' BGS 360109-US500003 @ 1445
5							
			0.8		5-5.5' OLIVE BROWN F/M SAND, POORLY GRADED, MOIST, SP, VERY FAINT ODOR	SP	
			1.5		5.5-7' GREENISH BROWN F SAND, POORLY GRADED, SP, VERY STRONG ODOR, MOIST, DENSE	SP	
	S2 @ 1450	2.8 / 1.7	30.9		7-7.8' BLACK TO GREY WEATHERED BR (OR BOULDER), VERY STRONG ODOR;		COLLECTED SOIL SAMPLE @ 6.5-6.8' BGS (OBSERVED CONT.) 360109-US500007 @ 1450
			88.5				
			133				
			155	A	MACROCORE REFUSAL @ 7.8' BGS.	WEATHERED BR	COLLECTED SOIL SAMPLE OF WEATHERED BR @ 7.8' 360109-US500008 @ 1500
8							
10							

NOTES: MONITORING BREATHING ZONE WHILE DRILLING INSIDE (VENTING EXHAUST OUTSIDE VIA PIPING);
CO: 0 CEL: 0
O2: 21.2 H2S: 7

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall Supplemental RI			Boring ID: GS-503
Project Location: New Rochelle, NY			Page No. 1
Project No.: 3612112221.06	Client: ~~USACE~~ NYSDEC		of: 1
Boring Location: Inside Building Inv	Refusal Depth: NA	Total Depth: 6.6	Bore Hole ID/OD:
Weather: 55° M cloudy	Soil Drilled: 6.6	Method: Hand geoprobe	Casing Size:
Subcontractor: NA		Protection Level: D	Sampler: 2' Macrocore
Driller: NA	Date Started: 10/26/15	Date Completed: 10/26/15	Sampler ID/OD:
Rig Type/Model: Hand geoprobe	Logged By: NW	Checked By:	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information			Monitoring	Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	NA PID (ppm)			
0.0				0-0.4 concrete slab		
				0.4-1.8 No sample, pre cleared w/ post hole digger	SP	
2.6	1			1.8-2.6 No Sample		
		2.0/1.35	0.0	Dark yellowish brown; poorly graded sand; trace to little fm subrounded gravel; trace silt; moist; dense; no staining no odor	SP	soil sample at 3.1 ft (1703) 360109-GS-503003 @ 17:03
	S1 @ 1703					
4.6						
		2.0/1.6	0.0	SAA	SP	soil sample at ~~6.2~~ 6.2 ft bgs 360109-GS-503006 @ 17:20
	2 (S2) 1720					
6.6				EOB at 6.6 ft bgs		

NOTES:

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: MW-501

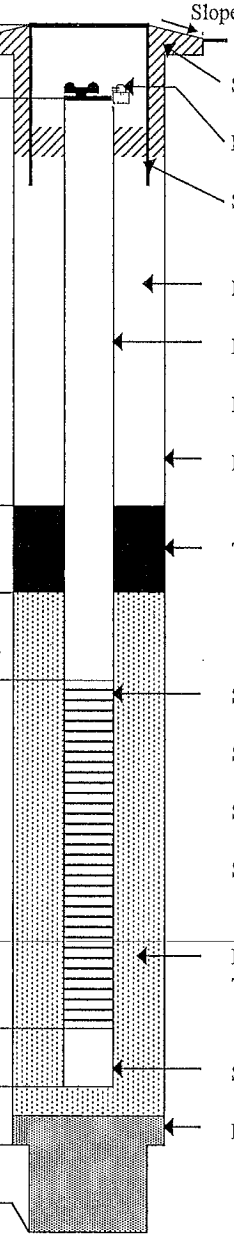
Project Name: Industrial Overall - Supplemental RI
Project Location: New Rochelle, New York
Project Number: 3612112221 Task Number 06.01
Subcontractor: Aztech Technologies Drilling Method: Direct Push
Development Method: PERISTALTIC PUMP Development Date: OCT. 17. 2015
Bucking Posts/Ballards: NA
Notes:

Date Started: OCTOBER 17, 2015 Date Completed: OCTOBER 18, 2015
Logged By: B. SHAW
Checked By: JPP Checked Date: 12/7/16

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft):

Item	Depth BMP (ft)	Elevation (ft)
Surface Casing Elevation	0	76.44
Ground Surface Elevation	0	76.44
Riser Pipe (Top)	~0.1	~76.34
Top of Well Seal	NA	NA
Top of Sand Pack	~0.5' Bls	~75.94
Top of Screen	0.5' Bls	~75.94
Base of Screen	~2.8' Bls	~73.64
End Cap	~2.8' Bls	~73.64
Drilled Depth	2.8'	73.64
Bottom of Exploration	2.8' Bls	73.64
Bedrock Surface	~2.8' Bls	~73.64



Description

Surface Seal Type: CONCRETE
Lock Identification: NA
Stickup Casing Diameter: NA
Backfill/Grout Type: NA
Riser Pipe Type: NA
Riser Pipe ID: NA
Borehole Diameter: 2.5-INCH
Type of Seal: NA
Screen Type: SLOTTED PVC
Screen ID: 1-INCH ~~0.010" x 2'-8"~~
Screen Slot Size: 0.010" x 2.8'
Screen Length: 2.8'
Filter/Sand Pack Type: MON
Sump:
Fallback/Backfill: NA

NOT TO SCALE

MACTEC
511 Congress Street, Portland Maine 04101

WELL/PIEZOMETER CONSTRUCTION DIAGRAM - FLUSHMOUNT

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: MW-501

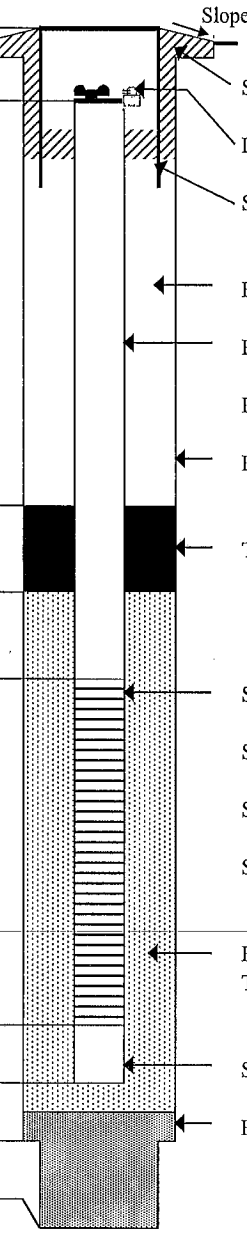
Project Name: Industrial Overall - Supplemental RI
Project Location: New Rochelle, New York
Project Number: 3612112221 Task Number 06.01
Subcontractor: Aztech Technologies Drilling Method: Direct-Push
Development Method: PERISTALTIC PUMP Development Date:
Bucking Posts/Ballards: NA
Notes:

Date Started: OCTOBER 17, 2015 Date Completed: OCTOBER 18, 2015
Logged By: B. SHAW
Checked By: JR Checked Date: 11/3/15
No elevation data yet.

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft):

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation			
Ground Surface Elevation			
Riser Pipe (Top)			
Top of Well Seal	NA		
Top of Sand Pack	~0.5' Bgs		
Top of Screen	0.5' Bgs		
Base of Screen	~2.8' Bgs		
End Cap	~2.8' Bgs		
Drilled Depth	2.8'		
Bottom of Exploration	2.8' Bgs		
Bedrock Surface	~2.8' Bgs		



Surface Seal Type: CONCRETE
Lock Identification: NA
Stickup Casing Diameter: NA
Backfill/Grout Type: NA
Riser Pipe Type: NA
Riser Pipe ID: NA
Borehole Diameter: 2.5-INCH
Type of Seal: NA
Screen Type: SLOTTED PVC
Screen ID: 1-INCH ~~0.010" x 2'~~
Screen Slot Size: 0.010" x 2.8'
Screen Length: 2.8'
Filter/Sand Pack Type: #0N
Sump:
Fallback/Backfill: NA

NOT TO SCALE

MACTEC
511 Congress Street, Portland Maine 04101

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: MW-504

Project Name:	Industrial Overall - Supplemental RI	Date Started:	OCT. 18, 2015 Date Completed: OCT. 18, 2015
Project Location:	New Rochelle, New York	Logged By:	BSHAW
Project Number:	3612112221 Task Number 06.01	Checked By:	JPP Checked Date: 12/7/15
Subcontractor:	Aztech Technologies Drilling Method: Direct Push		
Development Method:	PUMP & SURGE Development Date: OCT. 18, 2015		
Bucking Posts/Ballards:	NONE		
Notes:			

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser

MP Elevation (ft):

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation	0	76.49	Slope Away
Ground Surface Elevation	0	76.49	Surface Seal Type: CONCRETE
Riser Pipe (Top)	~0.1' BMP	76.39	Lock Identification: NONE
			Stickup Casing Diameter: 6-INCH
			Backfill/Grout Type: NONE
			Riser Pipe Type: PVC - SCH 40
			Riser Pipe ID: 1-INCH
			Borehole Diameter: 2 7/8-INCH
Top of Well Seal	0.5' BMP	75.99	Type of Seal: BENSEAL
Top of Sand Pack	1.5' BMP	74.99	
Top of Screen	~4.5' BMP	~71.99	Screen Type: SLOTTED PVC
			Screen ID: 1-INCH
			Screen Slot Size: 0.010"
			Screen Length: 10'
			Filter/Sand Pack Type: #1 INDUSTRIAZ QUARTZ
Base of Screen	~14.5' BMP	~61.99	
End Cap	~14.6' BMP	~61.89	Sump: ~0.2'
Drilled Depth	18.2' BMP	58.29	Fallback/Backfill: NATIVE
Bottom of Exploration	18.2' BMP	58.29	(WEATHERED BR
Bedrock Surface	14.8' BMP	61.69	

NOT TO SCALE

MACTEC
511 Congress Street, Portland Maine 04101

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: MW-504

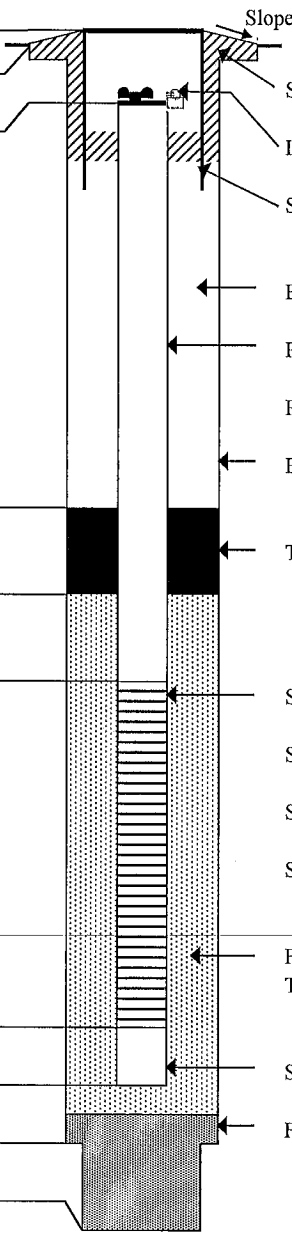
Project Name:	Industrial Overall - Supplemental RI	Date Started:	OCT. 18, 2015 Date Completed: OCT. 18, 2015
Project Location:	New Rochelle, New York	Logged By:	BSH/AW
Project Number:	3612112221 Task Number 06.01	Checked By:	JR Checked Date: 11/3/15
Subcontractor:	Aztech Technologies Drilling Method: Direct Push		no elevation data yet.
Development Method:	Pump & Surge Development Date: OCT. 18, 2015		
Bucking Posts/Ballards:	NONE		
Notes:			

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser

MP Elevation (ft):

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation			
Ground Surface Elevation			
Riser Pipe (Top)	~0.1' BMS		
Top of Well Seal	0.5' BMS		
Top of Sand Pack	1.5' BMS		
Top of Screen	~4.5' BMS		
Base of Screen	~14.5' BMS		
End Cap	~14.6' BMS		
Drilled Depth	18.2' BMS		
Bottom of Exploration	18.2' BMS		
Bedrock Surface	14.8' BMS		



Surface Seal Type: CONCRETE

Lock Identification: NONE

Stickup Casing Diameter: 6-INCH

Backfill/Grout Type: NONE

Riser Pipe Type: PVC - SCH 40

Riser Pipe ID: 1-INCH

Borehole Diameter: 2 7/8-INCH

Type of Seal: BENSEAL

Screen Type: SLOTTED PVC SCH 40

Screen ID: 1-INCH

Screen Slot Size: 0.010"

Screen Length: 10'

Filter/Sand Pack Type: #1 INDUSTRIAL QUARTZ

Sump: ~0.2'

Fallback/Backfill: NATIVE (WEATHERED BR)

NOT TO SCALE

MACTEC

511 Congress Street, Portland Maine 04101

WELL/PIEZOMETER CONSTRUCTION DIAGRAM - FLUSHMOUNT

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: MW-505

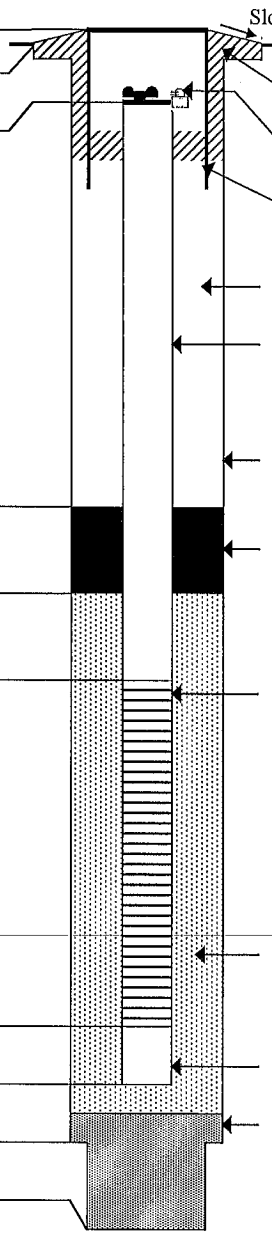
Project Name: Industrial Overall - Supplemental RI
Project Location: New Rochelle, New York
Project Number: 3612112221 Task Number 06.01
Subcontractor: Aztech Technologies Drilling Method: Direct Push
Development Method: OVER PUMP & SURGE Development Date:
Bucking Posts/Ballards: NONE
Notes:

Date Started: OCT. 20, 2015 Date Completed: OCT. 21, 2015
Logged By: B STAW
Checked By: JR Checked Date: 11/3/15
No elevation data yet.

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft):

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation			
Ground Surface Elevation			
Riser Pipe (Top)			
Top of Well Seal	~1.5' Bkg		
Top of Sand Pack	19.0' Bkg		
Top of Screen	21.0' Bkg		
Base of Screen	~26.0' Bkg		
End Cap	~26.3' Bkg		
Drilled Depth	~26.5' Bkg		
Bottom of Exploration	~26.5' Bkg		
(UNWEATHERED) Bedrock Surface	~15.5' Bkg		



Surface Seal Type: STEEL ROAD BOX / CONCRETE
Lock Identification: NONE
Stickup Casing Diameter: 8-INCH
Backfill/Grout Type: NONE
Riser Pipe Type: SCH 40 PVC
Riser Pipe ID: 1-INCH
Borehole Diameter: 4-INCH x 2.5-INCH
Type of Seal: HOLEPLUG (BENTONITE)
Screen Type: SLOTTED PVC
Screen ID: 1-INCH
Screen Slot Size: 0.010"
Screen Length: ~5'
Filter/Sand Pack Type: #1 INDUSTRIAL QUARTZ
Sump: NA
Fallback/Backfill: ~0.1'

NOT TO SCALE

MACTEC
511 Congress Street, Portland Maine 04101

WELL/PIEZOMETER CONSTRUCTION DIAGRAM - FLUSHMOUNT

WELL DEVELOPMENT RECORD

MACTEC

511 Congress Street, Portland Maine 04101

PROJECT NAME	Industrial Overall - Supplemental RI
PROJECT NUMBER	3612112221
WELL INSTALLATION DATE	10/17/15
WELL DEVELOPMENT DATE	10/19/15

LOCATION ID	MW-501
PAGE	1 OF 1
START TIME	1625
START DATE	10/19/15
END TIME	1649
END DATE	10/19/15

WELL DIAMETER (INCHES): [X] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	2.34 FT	FINAL WELL DEPTH (BMP)	2.35 FT	SCREEN LENGTH	2.34 FT	PROT. CASING STICKUP (AGS)	NA FT
INITIAL DTW (BMP)	1.13 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.01 FT	SCREENED INTERVAL (BMP)	0 TO 2.3	TOC/TOR DIFFERENCE	FT
WATER COLUMN (initial well depth - initial depth to water)	1.21 FT	DTW AFTER DEVELOP. (BMP)	1.13 FT	PUMPING DEPTH (BMP)	2.0 FT	PID AMBIENT AIR	3.6 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.05 GAL	FINAL RECOVERY DEPTH (BMP)	1.13 FT	APPROXIMATE RECHARGE RATE	FT/MIN	PID WELL MOUTH	2.4 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.9 GAL	FINAL RECOVERY TIME (elapsed)	0.01 MIN	FLUIDS LOST DURING DRILLING	NA GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1629	1.13	300	23.42	1.990	6.74	2.95	61.5	162.2	0.25	0.25	
1633	1.13	300	23.50	1.994	6.70	2.01	8.73	160.7	0.25	0.5	
1636	1.13	300	23.53	1.994	6.69	1.75	2.58	111.1	0.25	0.75	
1639	1.13	300	23.54	1.995	6.68	1.75	2.11	105.1	0.25	1.0	
1642	1.13	300	23.54	1.996	6.68	1.76	0.75	150.3	0.25	1.25	
1645	1.13	300	23.55	1.995	6.68	1.75	0.57	142.7	0.25	1.5	
1648	1.13	300	23.54	1.994	6.67	1.72	0.67	117.4	0.25	1.75	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [ ] OTHER

- [X] WATER LEVEL METER
- [X] PID 15839
- [X] WQ METER MO15-07
- [X] TURB. METER MO24-33
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	X	
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	X	
Turbidity < 5NTUs?	X	
10% change in field parameters?		X

WAS DEVELOPMENT CRITERIA MET? Y [X] N [ ]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [Yes] N [ ]

NUMBER OF GALLONS GENERATED: 1.9

NOTES: Redox swinging within a range >10% change all other criteria met

SKETCH

Well Developer Signature: MW

Print Name: Nate Voyer

Checked By:

Date:

WELL DEVELOPMENT RECORD

WELL DEVELOPMENT RECORD

MACTEC

511 Congress Street, Portland Maine 04101

PROJECT NAME: Industrial Overall - Supplemental RI		LOCATION ID: MW ~~65~~ 504	PAGE: 1 OF 3
PROJECT NUMBER: 3612112221		START TIME: 1534	START DATE: 10/18/15
WELL INSTALLATION DATE: 10/18/15	WELL DEVELOPMENT DATE: ~~10/18~~ 10/19 (NW)	END TIME: 1551	END DATE: 10/19/15

WELL DIAMETER (INCHES): [X] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	13.84 FT	FINAL WELL DEPTH (BMP)	14.09 FT	SCREEN LENGTH	10 FT	PROT. CASING STICKUP (AGS)	NA FT
INITIAL DTW (BMP)	1.05 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.25 FT	SCREENED INTERVAL (BMP)	TO	TOC/TOR DIFFERENCE	FT
WATER COLUMN (initial well depth - initial depth to water)	~~13.84~~ 12.79 (NW) FT	DTW AFTER DEVELOP. (BMP)	14.05 FT	PUMPING DEPTH (BMP)	~~13.84~~ ~~12.79~~ (NW) FT	PID AMBIENT AIR	0.0 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	FINAL RECOVERY DEPTH (BMP)	1.27 FT	APPROXIMATE RECHARGE RATE	0.3 FT/MIN	PID WELL MOUTH	0.0 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL.)	7.75 GAL	FINAL RECOVERY TIME (elapsed)	170 MIN	FLUIDS LOST DURING DRILLING	NA GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1537	4.75	250	21.78	2.464	7.59	1.46	>1000	-514.0	0.1	0.1	very silty
1544	12.80	250	21.34	2.539	7.56	5.87	>1000	-398.1	0.5	0.6	
1547	Dry	250	~~21.57~~ (NW)	~~2.397~~ (NW)			(NW) ~~298~~	~~-241.2~~ (NW)			
1630	12.21	250	21.52	2.397	7.58	5.65	298	-241.2	0.5	1.1	
1634	Dry	250					414			1.5	
1717	13.68	250	21.64	2.260	7.60	5.32	>1000	-327.9	0.5	2.0	
1718	Dry									2.1	
1800	13.81	250	21.60	2.226	7.52	5.78	969	-302.5	0.5	2.6	
	Dry										
10/19 0852	7.35	250	21.08	2.214	7.58	3.55	>1000	-428.4	0.25	2.85	
0858	14.08	250	21.54	2.285	7.47	5.63	>1000	-367.5	0.25	3.1	
0941	8.27	250	21.05	2.255	7.61	7.47	>1000	-294.3	0.2	3.3	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [ ] OTHER

- [X] WATER LEVEL METER
- [X] PID 15839
- [X] WQ METER MO15-07
- [X] TURB. METER MO24-33
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	X	
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	X	
Turbidity < 5NTUs?		X
10% change in field parameters?		X

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [Yes] N [ ]

NUMBER OF GALLONS GENERATED: 7.8

NOTES: Low yielding turbid well ; unable to meet <5 NTU + 10% parameters

Well Developer Signature: MF Print Name: Nate Hogan

Checked By: Date:

SKETCH

WELL DEVELOPMENT RECORD

WELL DEVELOPMENT RECORD

MACTEC

511 Congress Street, Portland Maine 04101

PROJECT NAME	Industrial Overall - Supplemental RI	LOCATION ID	MW-504	PAGE	2 OF 3
PROJECT NUMBER	3612112221	START TIME	1534	START DATE	10/18/15
WELL INSTALLATION DATE	10/18/15	END TIME	1551	END DATE	10/19/15
WELL DEVELOPMENT DATE	10/19/15				

WELL DIAMETER (INCHES): [X] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	13.84 FT	FINAL WELL DEPTH (BMP)	14.09 FT	SCREEN LENGTH	10 FT	PROT. CASING STICKUP (AGS)	NA FT
INITIAL DTW (BMP)	1.05 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.25 FT	SCREENED INTERVAL (BMP)	TO	TOC/TOR DIFFERENCE	FT
WATER COLUMN (initial well depth - initial depth to water)	12.74 FT	DTW AFTER DEVELOP. (BMP)	14.05 FT	PUMPING DEPTH (BMP)	13.84 FT	PID AMBIENT AIR	0.0 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	FINAL RECOVERY DEPTH (BMP)	1.27 FT	APPROXIMATE RECHARGE RATE	0.3 FT/MIN	PID WELL MOUTH	0.0 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	7.75 GAL	FINAL RECOVERY TIME (elapsed)	170 MIN	FLUIDS LOST DURING DRILLING	NA GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
0946	13.17	250	21.57	2.314	7.48	6.53	71000	-288.9	0.25	3.55	
1033	9.92	250	21.18	2.253	7.06	5.35	>1000	-295.5	0.25	3.8	
1036	13.72	250	21.56	2.303	7.18	6.58	>1000	-282.0	0.25	4.05	
1120	9.45	250	21.25	2.270	7.29	7.32	>1000	-290.7	0.25	4.3	
1125	13.89	250	21.44	2.283	7.16	6.72	>1000	-278.3	0.25	4.55	
1212	8.87	175	21.32	2.222	7.21	5.01	690	-244.8	0.3	4.85	
1219	12.27	175	21.52	2.265	7.14	4.54	373	-232.4	0.4	5.25	
1309	9.89	150	21.33	2.240	7.20	4.44	323	-236.5	0.25	5.5	
1314	13.42	150	21.66	2.244	7.02	4.64	119	-238.8	0.5	6.0	
1400	8.27	150	21.39	2.234	7.08	5.16	29.1	-190.4	0.25	6.25	
1406	12.17	150	21.71	2.269	7.01	3.27	88.1	-255.3	0.25	6.5	
1455	8.87	150	21.50	2.245	7.04	4.47	20.9	-189.3	0.25	~~6.75~~ (w) 7.0	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [ ] OTHER

- [X] WATER LEVEL METER
- [X] PID 15839
- [X] WQ METER MO15-07
- [X] TURB. METER MO24-33
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	X	
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	X	
Turbidity < 5NTUs?		X
10% change in field parameters?		X

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [Yes] N [ ]

NUMBER OF GALLONS GENERATED: 7.8

SKETCH

NOTES: See Page 1

Well Developer Signature: MH

Print Name: Nate Vogan

Checked By:

Date:

WELL DEVELOPMENT RECORD

MACTEC

511 Congress Street, Portland Maine 04101

PROJECT NAME	Industrial Overall - Supplemental RI	LOCATION ID	MW-504	PAGE	3 OF 3
PROJECT NUMBER	3612112221	START TIME	1534	START DATE	10/18/15
WELL INSTALLATION DATE	10/18/15	END TIME	1551	END DATE	10/19/15
WELL DEVELOPMENT DATE	10/19/15				

WELL DIAMETER (INCHES): [X] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	13.84 FT	FINAL WELL DEPTH (BMP)	14.09 FT	SCREEN LENGTH	10 FT	PROT. CASING STICKUP (AGS)	N.A FT
INITIAL DTW (BMP)	1.05 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.25 FT	SCREENED INTERVAL (BMP)	TO	TOC/TOR DIFFERENCE	FT
WATER COLUMN (initial well depth - initial depth to water)	12.74 FT	DTW AFTER DEVELOP. (BMP)	14.05 FT	PUMPING DEPTH (BMP)	13.84 FT	PID AMBIENT AIR	0.0 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	FINAL RECOVERY DEPTH (BMP)	1.27 FT	APPROXIMATE RECHARGE RATE	0.3 FT/MIN	PID WELL MOUTH	0.0 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	7.75 GAL	FINAL RECOVERY TIME (elapsed)	170 MIN	FLUIDS LOST DURING DRILLING	NA GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1500	13.11	150	21.74	2.269	7.01	3.52	24.2	-225.2	0.25	~~4.0~~	7.25
1545	8.95	150	21.41	2.252	7.06	4.50	22.1	-170.4	0.25	7.5	
1548	12.50	150	21.67	2.258	7.01	4.14	26.2	-188.8	0.25	7.75	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [ ] OTHER

- [X] WATER LEVEL METER
- [X] PID 15839
- [X] WQ METER MO15-07
- [X] TURB. METER MO24-33
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	X	
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	X	
Turbidity < 5NTUs?		X
10% change in field parameters?		X

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [Yes] N [ ]

NUMBER OF GALLONS GENERATED: 7.8

SKETCH

NOTES

See Page 1

Well Developer Signature: MA

Print Name: Nate Vogen

Checked By:

Date:

WELL DEVELOPMENT RECORD

MACTEC

511 Congress Street, Portland Maine 04101

PROJECT NAME	Industrial Overall - Supplemental RI
PROJECT NUMBER	3612112221
WELL INSTALLATION DATE	10/21/15
WELL DEVELOPMENT DATE	10/26/15
LOCATION ID	MW-505
PAGE	1 OF 1
START TIME	0846
START DATE	10/26/15
END TIME	(N) ~~0846~~
END DATE	10/26/15

WELL DIAMETER (INCHES): [X] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	24.93 FT	FINAL WELL DEPTH (BMP)	24.93 FT	SCREEN LENGTH	10 FT	PROT. CASING STICKUP (AGS)	N.A FT
INITIAL DTW (BMP)	1.19 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.0 FT	SCREENED INTERVAL (BMP)	14.9 TO 24.9	TOC/TOR DIFFERENCE	FT
WATER COLUMN (initial well depth - initial depth to water)	23.74 FT	DTW AFTER DEVELOP. (BMP)	24.9 FT	PUMPING DEPTH (BMP)	24.9 FT	PID AMBIENT AIR	0.0 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.97 GAL	FINAL RECOVERY DEPTH (BMP)	10.11 FT	APPROXIMATE RECHARGE RATE	0.1 FT/MIN	PID WELL MOUTH	1.8 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	5.0 GAL	FINAL RECOVERY TIME (elapsed)	27 hours ~~MIN~~	FLUIDS LOST DURING DRILLING	NA GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
0852	18.27	500	19.42	0.280	8.13	2.84	>1000	-291.6	1.0	1.0	
0900	21.50	500	19.19	0.363	7.51	2.61	>1000	-176.8	1.5	1.5	
0906	24.94	500	18.85	0.291	7.24	1.16	>1000	-371.9	2.5	2.5	
1045	20.13	500	19.41	0.669	7.55	7.31	>1000	96.5			
1050	21.83	500	19.52	0.682	7.39	6.70	>1000	104.8		3.5	
1055	23.60	500	19.54	0.529	7.20	6.86	>1000	91.2		3.8	
1240	20.75	500	20.58	1.343	7.18	6.78	271	46.2			
1245	23.71	500	19.79	1.235	7.13	6.90	>1000	75.3		5.1	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [ ] OTHER

- [X] WATER LEVEL METER M200-47
- [X] PID 15839
- [X] WQ METER Dois- 07
- [X] TURB. METER MOD4-33
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?		X
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?		X
Turbidity < 5NTUs?		X
10% change in field parameters?		

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [Yes] N [ ]

NUMBER OF GALLONS GENERATED: 5.0

SKETCH

NOTES: Dry at 9.0 (15 well volumes); unable to remove 65 gallons of drilling fluid due to low yield

Well Developer Signature: [signature]

Print Name: Nate Vogan

Checked By:

Date:

WELL DEVELOPMENT RECORD

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Industrial Overall - Supplemental RI	LOCATION ID: P2-22 / DATE: 10/18/05
PROJECT NUMBER: 3612112221.06	START TIME: 1312 / END TIME: 1407
SAMPLE ID: 360109-P2-2216 / SAMPLE TIME: 1405	SITE NAME/NUMBER: Industrial Overall/360109 / PAGE: 1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	8.17 FT	FINAL DTW (BMP)	9.05 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	~~NA~~ FT
WELL DEPTH (BMP)	20.77 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	12.6 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.04 GAL	PID WELL MOUTH	0.1 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	2.9 GAL	DRAWDOWN/ TOTAL PURGED	0.04 / 2.9	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
0	8.17	200	19.09	3.066	6.64	7.38	45.6	128.1	16.0	
5	8.99	200	20.25	3.365	6.48	3.26	21.9	119.9	16.0	
10	9.02	200	20.55	3.518	6.46	3.10	9.62	124.2	16.0	
15	9.03	200	20.56	3.571	6.46	2.94	7.23	127.3	16.0	
20	9.03	200	20.69	3.584	6.46	2.79	4.44	127.5	16.0	
25	9.04	200	20.66	3.608	6.45	2.53	2.47	127.9	16.0	
30	9.03	200	20.68	3.614	6.45	2.39	1.47	129.6	16.0	
35	9.04	200	20.86	3.628	6.46	2.21	1.09	128.8	16.0	
40	9.04	200	20.81	3.629	6.46	2.16	1.09	127.0	16.0	
45	9.05	200	20.82	3.625	6.46	2.11	0.80	128.2	16.0	
50	9.05	200	20.67	3.635	6.45	2.13	0.68	127.0	16.0	

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER M20-47
- [X] PID 15839
- [X] WQ METER M015-07
- [X] TURB. METER M024-33
- [X] PUMP S008-41
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260C	N	HCl	40mL	3	N	360109-P2-2216

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	X	
NO-PURGE METHOD UTILIZED		X

NUMBER OF GALLONS GENERATED: 3.0

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

needs new O-Ring for cap (missing)

Sampler Signature: [signature] Print Name: Nate Vogen

Checked By: Date:

MACTEC
511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Industrial Overall - Supplemental RI	LOCATION ID: PZ-33
PROJECT NUMBER: 3612112221.06	DATE: 10/19/15
SAMPLE ID: 360109-PZ-3315	SAMPLE TIME: 1140
	START TIME: 1010
	END TIME: 1141
	SITE NAME/NUMBER: Industrial Overall/360109
	PAGE: 1 OF 2

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	3.07 FT	FINAL DTW (BMP)	11.28 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	17.89 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.1 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	14.82 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.3 GAL	PID WELL MOUTH	0.7 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.6 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	4.7 GAL	DRAWDOWN/ TOTAL PURGED	0.3/4.7	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
0	6.31	200	20.31	2.467	7.21	2.30	4.68	205.3	12.9	
5	7.52	200	20.68	2.554	7.53	0.67	2.27	194.7	12.9	
10	8.52	200	20.68	2.576	7.56	0.58	1.81	194.1	12.9	
15	9.32	200	20.55	2.557	7.57	0.48	1.02	184.5	12.9	
20	9.75	200	20.49	2.541	7.55	0.54	2.19	195.7	12.9	
25	10.09	200	20.43	2.518	7.59	0.47	0.90	192.1	12.9	
30	10.30	200	20.38	2.499	7.61	0.45	0.71	182.7	12.9	
35	10.47	200	20.35	2.466	7.63	0.39	0.45	172.6	14.9	Deep intake close to drawdown
40	10.61	200	20.37	2.468	7.63	0.42	0.39	166.9	14.9	
45	10.74	200	20.39	2.465	7.63	0.44	0.45	162.7	14.9	
50	10.84	200	20.37	2.461	7.63	0.45	0.43	157.0	14.9	
FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])			20	2.43	7.6	0.4	0.24	130	14.9	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [X] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [X] HDPE TUBING [ ] LDPE TUBING [ ] OTHER [ ] OTHER

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [X] WL METER M200-47 [X] PID 15839 [X] WQ METER M015-07 [X] TURB. METER ~~M015-39~~ M024-33 [X] PUMP 5008-41 [ ] OTHER [ ] FILTERS NO. ___ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	N	HCl	40 mL	3	N	360109-PZ-3315

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: [X] YES [ ] NO

NO-PURGE METHOD UTILIZED: [ ] YES [X] NO

NUMBER OF GALLONS GENERATED: 4.8

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Sampler Signature: MV Print Name: Mark Vogan

Checked By: Date:

MACTEC
511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Industrial Overall - Supplemental RI
PROJECT NUMBER	3612112221.06
SAMPLE ID	360109-PZ-3315
SAMPLE TIME	1140
LOCATION ID	PZ-33
DATE	10/19/15
START TIME	1010
END TIME	1141
SITE NAME/NUMBER	Industrial Overall/360109
PAGE	2 OF 2

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	3.07 FT	FINAL DTW (BMP)	11.28 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	17.89 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.1 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	14.82 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.34 GAL	PID WELL MOUTH	0.7 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.6 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	4.73 GAL	DRAWDOWN/ TOTAL PURGED	0.3/4.7	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
55	10.95	200	20.39	2.457	7.63	0.41	0.40	151.6	14.9	
60	11.04	200	20.38	2.451	7.63	0.44	0.41	145.4	14.9	
65	11.09	200	20.37	2.447	7.63	0.44	0.27	141.8	14.9	
70	11.13	200	20.36	2.443	7.63	0.40	0.25	137.4	14.9	
75	11.20	200	20.35	2.437	7.63	0.42	0.24	131.9	14.9	
80	11.21	200	20.35	2.433	7.64	0.40	0.24	128.7	14.9	
85	11.24	200	20.37	2.430	7.64	0.42	0.24	125.5	14.9	
			(W)	(W)	(W)	(W)	(W)	(W)		
			~~20~~	~~2.43~~	~~7.~~	0.4	~~0.24~~	~~130~~		

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	20	2.43	7.6	0.4	0.24	130

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER M200-47
- [X] PID 15839
- [X] WQ METER M015-07
- [X] TURB. METER M024-33
- [X] PUMP 5008-41
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260C	N	HCl	40mL	3	N	360109-PZ-3315

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [X] NO [ ]

NO-PURGE METHOD UTILIZED: YES [ ] NO [X]

NUMBER OF GALLONS GENERATED: 4.8

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: [signature] Print Name: Nak Vogen

Checked By: Date:

MACTEC
511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Industrial Overall - Supplemental RI
PROJECT NUMBER	3612112221.06
SAMPLE ID	360109-P2-34~~09~~ / 34~~09~~D
SAMPLE TIME	1730
LOCATION ID	P2-34
DATE	10/17/15
START TIME	1507
END TIME	1512
SITE NAME/NUMBER	Industrial Overall/360109
PAGE	1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	6.68 FT	FINAL DTW (BMP)	8.42 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	9.25 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	2.57 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.1 GAL	PID WELL MOUTH	0.1 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.11 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.1 GAL	DRAWDOWN/ TOTAL PURGED	0.1 gallons	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
3	8.57	200	24.00	0.960	7.15	~~1.79~~ 20.66	11.1	-124.4	9.25	Purged dry
	Purged	dry,	allow to	recover	then	sample				

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER M300-47
- [X] PID 15839
- [X] WQ METER M015-07
- [X] TURB. METER M024-33
- [X] PUMP 5008-41
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	N	HCl	40 mL	3	FD	360109-P23409
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[X]	[ ]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 0.1

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: [signature] Print Name: Nate Voigt

Checked By: Date:

MACTEC
511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Industrial Overall - Supplemental RI
PROJECT NUMBER	3612112221.06
SAMPLE ID	360109-PZ-3527
SAMPLE TIME	1720
LOCATION ID	PZ-35
DATE	10/17/15
START TIME	1625
END TIME	1720
SITE NAME/NUMBER	Industrial Overall/360109
PAGE	1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	7.34 FT	FINAL DTW (BMP)	9.99 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	31.56 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	24.22 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.11 GAL	PID WELL MOUTH	0.1 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.99 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	4.3 GAL	DRAWDOWN/ TOTAL PURGED	0.11/4.3	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
0	8.98	300	21.21	2.516	7.31	6.77	48.3	-131.7	26.6	
5	9.32	300	20.67	2.539	7.40	1.68	19.1	-133.1	26.6	
10	9.64	300	20.25	2.550	7.41	0.70	12.1	-140	26.6	
15	9.76	300	20.20	2.570	7.45	0.61	4.62	-128.2	26.6	
20	9.82	300	20.11	2.584	7.45	0.61	4.07	-117.9	26.6	
25	9.88	300	20.02	2.594	7.46	0.59	2.79	-110.4	26.6	
30	9.93	300	19.97	2.602	7.46	0.48	2.47	-107.5	26.6	
35	9.95	300	19.92	2.608	7.46	0.48	1.99	-101.5	26.6	
40	9.96	300	19.89	2.607	7.46	0.38	2.02	-97.7	26.6	
45	9.97	300	19.85	2.605	7.46	0.38	1.44	-94.4	26.6	
50	9.99	300	19.84	2.600	7.46	0.40	1.41	-93.8	26.6	
FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])			20	2.60	7.5	0.4	1.41	-94		TEMP.: nearest degree (ex. 10.1 = 10) COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696) pH: nearest tenth (ex. 5.53 = 5.5) DO: nearest tenth (ex. 3.51 = 3.5) TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101) ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [X] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [X] HDPE TUBING [ ] LDPE TUBING [ ] OTHER [ ] OTHER

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [X] WL METER M000-47 [X] PID 15859 [X] WQ METER M015-07 [X] TURB. METER M024-33 [X] PUMP 5008-41 [ ] OTHER [ ] FILTERS NO. TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	N	HCl	120 mL	Y	N	360109-PZ3527

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [X] NO [ ]

NO-PURGE METHOD UTILIZED: YES [ ] NO [X]

NUMBER OF GALLONS GENERATED: _____

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Sampler Signature: MV Print Name: Nate Vagen

Checked By: Date:

MACTEC

511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Industrial Overall - Supplemental RI	LOCATION ID: MW-501
PROJECT NUMBER: 3612112221.06	DATE: 10/27/15
SAMPLE ID: 360109-MW-501 02 (MS/MD)	SAMPLE TIME: 1840
	START TIME: 1756
	END TIME: 1840
	SITE NAME/NUMBER: Industrial Overall/360109
	PAGE: 1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	1.61 FT	FINAL DTW (BMP)	1.61 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	2.34 FT	SCREEN LENGTH	2.34 FT	PID AMBIENT AIR	0.2 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	0.73 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.0004 GAL	PID WELL MOUTH	0.3 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.03 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	2.3 GAL	DRAWDOWN/ TOTAL PURGED	0.0004 / 2.3	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
5	1.63	200	23.40	2.564	7.19	2.57	12.5	129.3		
10	1.62	200	23.41	2.557	6.91	2.14	2.42	132.1		
15	1.62	200	23.39	2.555	6.75	2.03	0.73	130.7		
20	1.62	200	23.36	2.559	6.69	1.69	0.42	130.8		
25	1.62	200	23.34	2.566	6.64	1.35	0.49	130.2		
30	1.62	200	23.31	2.579	6.61	1.19	0.37	130.2		
35	1.62	200	23.30	2.584	6.60	1.14	0.47	132.5		
38	1.62	200	23.30	2.586	6.59	1.12	0.23	133.3		
41	1.62	200	23.30	2.586	6.59	1.10	0.24	133.1		

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	23	2.59	6.6	1.1	0.2	130

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER
- [X] PID
- [X] WQ METER
- [X] TURB. METER
- [X] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	(MS/MD) VOC	8260C	N	HCl	3x40mL		MS/MSD	see above

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[X]	[ ]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 2.3

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Sampler Signature: MW Print Name: Nate Vogen

Checked By: Date:

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Industrial Overall - Supplemental RI		SS-301	10/22/15
PROJECT NUMBER		START TIME	END TIME
3612112221.06.01		1410	1430
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
360109-GW-3010~~15~~14 (M)	1430	Industriall Overall / 360109	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP		X	
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	11.51 FT	FINAL DTW (BMP)	14.89 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	14.89 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	3.38 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.14 GAL	PID WELL MOUTH	2.6 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.14 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.25 GAL	DRAWDOWN/ TOTAL PURGED	NA	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
1413	12.01	150	19.49	1.178	6.63	3.34	840	-123.0	13.9	
1419	14.27	150	18.71	0.595	6.64	4.11	>1000	-141.9	14.7	
Dry at		1421								

SAMPLE OBSERVATIONS: CLEAR COLORED _____ CLOUDY _____ TURBID ~800 ODOR _____ OTHER (see notes) _____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[X] WATER LEVEL METER 1200-47
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID 15839
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[X] WQ METER MOIS-07
[ ] _____	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[X] TURB. METER MO24-33
[ ] WATTERA	[ ] HEXANE	[X] LDPE TUBING	[ ] OTHER _____	[X] PUMP 5008-41
[ ] OTHER _____	[ ] METHANOL	[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER
[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER _____	[ ] FILTERS NO. ____ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	HCl / 4 C	3 X 40 Ml	34	N	see above
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							

NOTES

Sample intake at 13.9 ft bgs
allow

SKETCH

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	X		NUMBER OF GALLONS GENERATED: 0.25
NO-PURGE METHOD UTILIZED		X	If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

Sampler Signature: MV Print Name: Nate Wyman

Checked By: Date:

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

...c1\Contract D007619\Projects\Industrial Overall Sen... ...4.0_Deliv... ...emental RI FAP\Attachment 2 - FDRs\Geoprobe GW

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Industrial Overall - Supplemental RI		SS-408	10/22/15
PROJECT NUMBER		**START TIME**	**END TIME**
3612112221.06.01		1356	1515
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
360109-GW-40815	1515	Industriall Overall / 360109	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER _____

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER _____

TUBING ID (INCHES) [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER _____

MEASUREMENT POINT (MP) [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER _____

WELL INTEGRITY	YES	NO	N/A
CAP		X	
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	14.44 FT	FINAL DTW (BMP)	14.86 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	14.86 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0-0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	0.42 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.02 GAL	PID WELL MOUTH	0-0 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.02 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.1 GAL	DRAWDOWN/ TOTAL PURGED	NA	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1356	BEGIN PURGING									
Not	enough	water	in	well	for	water	quality	→	purged	dry after 125 mL

SAMPLE OBSERVATIONS: CLEAR COLORED _____ CLOUDY _____ TURBID _____ ODOR _____ OTHER (see notes) _____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[X] WATER LEVEL METER MJOO-47
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID 15839
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[X] WQ METER MOIS-07
_____	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[X] TURB. METER MOJ4-33
[ ] WATTERA	[ ] HEXANE	[X] LDPE TUBING	[ ] OTHER _____	[X] PUMP 5008-41
[ ] OTHER _____	[ ] METHANOL	[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER
[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER _____	[ ] FILTERS NO. ___ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	HCl / 4 C	3 X 40 Ml			see above
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							

NOTES

allow to recover; only able to pull 42 mL after 1.25 hours; Submit single VOA

SKETCH

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[X]	[ ]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 0.1

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

Sampler Signature: [signature] Print Name: Nate Vogan

Checked By: Date:

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Industrial Overall - Supplemental RI	SAMPLE LOCATION: MW-504
PROJECT NUMBER: 3612112221.06.01	DATE: 10/27/15
SAMPLE ID: 360109-MW-504-10	START TIME: 0830
SAMPLE TIME: 1620	END TIME: 1622
SITE NAME/NUMBER: Industriall Overall / 360109	PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [X] WELL PIEZOMETER [ ] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	1.65 FT	FINAL DTW (BMP)	8.18 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	14.09 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.9 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	12.44 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.3 GAL	PID WELL MOUTH	3.4 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.5 GAL	DRAWDOWN/ TOTAL PURGED	0.3/0.5	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
0832	5.72	250	21.21	2.488	7.55	2.75	49.0	-397.2		
0835	10.17	250	21.54	2.510	7.43	1.38	52.2	-405.6		
0837	14.17	250	21.72	2.507	7.40	2.45	156	-340.2		Purged dry
1627	8.12	250	21.69	2.442	7.38	2.46	9.98	-167.1	10	Post sample

SAMPLE OBSERVATIONS: CLEAR X COLORED ____ CLOUDY ____ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC; [ ] SUBMERSIBLE; [ ] BLADDER; [ ] WATTERA; [ ] OTHER; [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX; [X] DEIONIZED WATER; [ ] POTABLE WATER; [ ] NITRIC ACID; [ ] HEXANE; [ ] METHANOL; [ ] OTHER

TUBING PUMP BLADDER MATERIALS: [X] SILICON TUBING; [ ] TEFLON TUBING; [ ] TEFLON LINED TUBING; [ ] HDPE TUBING; [ ] LDPE TUBING; [ ] OTHER; [ ] OTHER

[ ] S. STEEL PUMP MATERIAL; [ ] PVC PUMP MATERIAL; [ ] GEOPROBE SCREEN; [ ] TEFLON BLADDER; [ ] OTHER; [ ] OTHER; [ ] OTHER

EQUIPMENT USED: [X] WATER LEVEL METER M200-47; [X] PID 15859; [X] WQ METER MO15-07; [X] TURB. METER MU24-33; [X] PUMP 5008-41; [ ] OTHER; [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC 8260C	8260C	HCl	3x40mL	Y	N	See above

NOTES:
- recovered to 1.71 ft btoc by 1620
- purge tubing + sample ; take post sample water quality measurement

SKETCH

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	X		NUMBER OF GALLONS GENERATED: 0.5
NO-PURGE METHOD UTILIZED		X	If yes, purged approximately 1 standing volume prior to sampling or ____ mL for this sample location.

Sampler Signature: [signature] Print Name: Nate Vogan

Checked By: Date:

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Industrial Overall - Supplemental RI		MW-505	10/27/15
PROJECT NUMBER		START TIME	END TIME
3612112221.06.01		1512	1521
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
360109-MW-505-22	1515	Industriall Overall : 360109	1 OF 1

SAMPLE TYPE [X] GRAB [X] WELL/PIEZOMETER [ ] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER _____

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER _____

TUBING ID (INCHES) [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER _____

MEASUREMENT POINT (MP) [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER _____

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	10.11 FT	FINAL DTW (BMP)	17.11 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	24.93 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	N.A SEC
WATER COLUMN	14.82 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.3 0.6 (MW) GAL	PID WELL MOUTH	2.3 PPM	DISCHARGE TIMER SETTING	N.A SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.6 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.6 GAL	DRAWDOWN/ TOTAL PURGED	0.3/0.6	PRESSURE TO PUMP	N.A PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
1518	14.02	250	19.19	1.750	7.69	5.90	17.5	154.2	21.93	

SAMPLE OBSERVATIONS: CLEAR [X] COLORED [ ] CLOUDY [ ] TURBID [ ] ODOR [ ] OTHER (see notes) [ ]

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER _____
- [ ] WATTERA
- [ ] OTHER _____
- [ ] OTHER _____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER _____

TUBING PUMP BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER _____
- [ ] OTHER _____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] OTHER _____

EQUIPMENT USED
- [X] WATER LEVEL METER M200-47
- [X] PID 15839
- [X] WQ METER MU15-07
- [X] TURB. METER MU24-33
- [X] PUMP 5008-41
- [ ] OTHER _____
- [ ] FILTERS NO. ____ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	HCl	3x40mL	Y	N	see above
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							

NOTES

Well developed on 10/26/15
- purged dry for 5 well volumes
- take sample after purging tubing + take post sample water quality

SKETCH

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[X]	[ ]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 0.6 ~~0.25~~ (MW)

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

Sampler Signature: [signature] Print Name: Nate Vogen

Checked By: Date:

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

Soil Vapor and Air Field Data Record

					Ambient Air		Soil Vapor							
Location(1)	Type (2)	Depth (feet)	Excavation Method (3)	Sampling Method (4)	O_2 (% vol)	CO_2 (% vol)	O_2 (% vol)	CO_2 (% vol)	PID (ppbv)	Date/Time	Sample ID	PCE Result	TCE Result	Comment
RP-01	SA	9.2	NA	PRT						10-26-15 1400	SA-RP01-09			Manhole at intersection of Relyea and Bartels Place
BP-01	SA	8.4	NA	PRT						10-26-15 1417	SA-BP01-08			Bartels Place manhole (MH-01) in front of Bulfamante
PS-01	SA	9.8	NA	PRT						10-26-15 1435	SA-PS01-10			Pine Street manhole (MH-03) immediately adjacent to Pearlgreen Parking lot
PS-02	SA	10.6	NA	PRT						10-26-15 1445	SA-PS02-11			Pine Street manhole (MH-04) at turn of the sewer line
PS-03	SA	7.6	NA	PRT						10-26-15 1500	SA-PS03-08			Upgradient background sample at manhole outside 35 Pine Street
PS-04	SA	10.0	NA	PRT						10-26-15 1507	SA-PS04-10			Pine Street manhole (MH-05) in front of 21 Pine St
PS-05	SA	11.6	NA	PRT						10-26-15 1515	SA-PS05-12			Pine Street manhole (MH-06) in front of 12 Pine St
BP-02	SVG	3.0	GP	PPS	20.9	0.6	20.9	0.4	1268	10-26-15 1537	SVG-BP02-03			HS-508 Sample location adjacent to IO building post sample (20.9 / 0.2 / 657 ppbv)
BP-03	SVG	3.0	GP	PPS	20.9	0.6	20.9	0.4	673	10-26-15 1600	SVG-BP03-03			HS-507 Sample location adjacent to IO building post sample (20.9 / 0.4 / 828 ppbv)
BP-04	SVG	3.0	GP	PPS	20.9	0.4	20.9	0.4	1E+05	10-26-15 1610	SVG-BP04-03			HS-506 Sample location adjacent to IO building post sample (20.9 / 0.2 / 113 ppmv)
BP-05	SVG	3.0	HD, SV	PPS	20.9	0.4	20.9	0.4	615	10-27-15 1018	SVG-BP05-03			Eastern most point on sewer line (8.8 ft west of connection to main line); post sample (19.1 / 1.6 / 799)

Notes:
ppm- parts per million
ppbv-parts per billion per volume
PID- photo ionization detector
ug/m^3 - micrograms per cubic meter
PCE - Tetrachloroethene
TCE - Trichloroethene

(1) Sample Location
BP- Bartels Place
PS -Pine Street
MR- MetroNorth Property
ST#- Structure 1 or 10

(2) Sample Type
SVG- Soil Vapor Grab
SA- Sewer Line Air
IAS- Indoor Air Screening
AA- Ambient Air

(3) Excavation Method
SV- Shop Vac
AK- Air Knife
HA- Hand Auger
GP- hand geoprobe
HD- Hammer Drill

(4) Sampling Method
PPS- push point sampler
PRT- post run tubing
HSS- Hapsite Screening

Ambient Air	Soil Vapor

Sampled By: ____Nate Vogan_____Reviewed By: _____

Soil Vapor and Air Field Data Record

Location(1)	Type (2)	Depth (feet)	Excavation Method (3)	Sampling Method (4)	O_2 (% vol)	CO_2 (% vol)	O_2 (% vol)	CO_2 (% vol)	PID (ppbv)	Date/Time	Sample ID	PCE Result (ug/m^3)	TCE Result (ug/m^3)	Comment
BP-06	SVG	3.0	HD, SV	PPS	20.9	0.4	8.2	4.4	3158	10-27-15 1048	SVG-BP06-03			42.4 ft west of building tie in, associated with potential lateral (PL-02); post sample (6.6 / 9.2 / 3771)
BP-07	SVG	3.0	HD, SV	PPS	20.9	0.2	20.6	0.6	3535	10-27-15 1105	SVG-BP07-03			60.9 ft west of building tie in, associated with potential lateral (PL-03); post sample (20.9 / 0.6 / 2382)
BP-08	SVG	3.0	HD, SV	PPS	20.9	0.2	10.4	2.4	1365	10-27-15 1117	SVG-BP08-03			108.1 ft west of building tie in, potential lateral (PL-05) to 25 Bartels Place; post sample (0.7 / 3.4 / 1488)
BP-09	SVG	3.0	HD, SV	PPS	20.9	0.2	5.4	1.8	1924	10-27-15 1127	SVG-BP09-03			111.2 ft west of building tie in, potential lateral (PL-05) to 16 Bartels Place; post sample (8.4 / 1.6 / 2042)
BP-10	SVG	3.0	HD, SV	PPS	20.9	0	12.2	1.8	990	10-27-15 1145	SVG-BP10-03			155.7 ft west of building tie in (MH-01), NE side; post sample (9.5 / 2.2 / 3005)
BP-11	SVG	3.0	HD, SV	PPS	20.9	0	5.1	4.6	2114	10-27-15 1157	SVG-BP11-03			155.7 ft west of building tie in (MH-01), NW side; post sample (11.6 / 2.6 / 2743)
BP-12	SVG	3.0	HD, SV	PPS	20.9	0	6.5	3	3098	10-27-15 1210	SVG-BP12-03			155.7 ft west of building tie in (MH-01), SW side; post sample (5.7 / 3.0 / 1069)
BP-13	SVG	4.0	HD, SV	PPS	20.9	0	17.4	0.3	2488	10-27-15 1228	SVG-BP13-04			188.7 ft west of building tie in, in front of 29 Bartels Place; post sample (11.8 / 1.6 / 3730)
BP-14	SVG	2.5	HD, SV	PPS	20.9	0.2	20.9	0.2	3052	10-27-15 1404	SVG-BP14-03			218.7 ft west of building tie in, in front of 31 Bartels place; post sample (19.8 / 0.0 / 2484)
BP-15	SA	2.0	HD, SV	PRT	20.9	0	20.9	0.2	2689	10-27-15 1423	SA-BP15-03			Storm sewer at corner of Clear Channel Outdoor and the MNR property; post (20.9 / 0.0 / 2109)
BP-16	SVG	2.5	HD, SV	PPS	20.9	0.2	17.1	2	2058	10-27-15 1533	SVG-BP16-03			Sample 7 ft east of BP-07, IO side of sewer line; post sample (16.7 / 2.2 / 2384)

Notes:
ppm- parts per million
ppbv-parts per billion per volume
PID- photo ionization detector
ug/m^3 - micrograms per cubic meter
PCE - Tetrachloroethene
TCE - Trichloroethene

(1) Sample Location
BP- Bartels Place
PS -Pine Street
MR- MetroNorth Property
ST#- Structure 1 or 10

(2) Sample Type
SVG- Soil Vapor Grab
SA- Sewer Line Air
IAS- Indoor Air Screening
AA- Ambient Air

(3) Excavation Method
SV- Shop Vac
AK- Air Knife
HA- Hand Auger
GP- hand geoprobe
HD- Hammer Drill

(4) Sampling Method
PPS- push point sampler
PRT- post run tubing
HSS- Hapsite Screening

Ambient Air	Soil Vapor

Sampled By: ____Nate Vogan_____Reviewed By: _____

Soil Vapor and Air Field Data Record

Location(1)	Type (2)	Depth (feet)	Excavation Method (3)	Sampling Method (4)	O_2 (% vol)	CO_2 (% vol)	O_2 (% vol)	CO_2 (% vol)	PID (ppbv)	Date/Time	Sample ID	PCE Result (ug/m^3)	TCE Result (ug/m^3)	Comment
BP-17	SVG	3.0	HD, SV	PPS	20.9	0.2	12.4	3	1267	10-27-15 1548	SVG-BP17-03			16 ft west of BP-07 between 21 and 23 Bartles Place; post sample 99.5 / 3.6 / 1280)
BP-18	SVG	3.0	HD, SV	PPS	20.9	0.4	1.7	2.6	11300	10-27-15 1706	SVG-BP18-03			7 ft west of BP-07; post sample (0.4 / 8.4 / 6640)
PS-06	SVG	5.8	HD, SV	PPS	20.9	0	20	1.6	7045	10-28-15 1130	SVG-PS06-06			Adjacent to brick wall for Pearlgreen; Post sample (20.0 / 1.4 / 6944)
PS-07	SVG	5.8	HD, SV	PPS	20.9	0	20.9	0	6247	10-28-15 1153	SVG-PS07-06			4 ft south of manhole MH-04; post sample (20.9 / 0.0 / 7053)
PS-08	SA	6.2	NA	PRT	20.9	0	20.9	0	7910	10-28-15 1220	SA-PS08-06			Catch basin sample from storm sewer in front of Pearlgreen; post sample (20.9 / 0.0 / 7910)
PS-09	SVG	2.9	HD, SV	PPS	20.9	0	NA	NA	8071	10-28-15 1229	SVG-PS09-03			53.4 ft south of MH-04; associated with potential lateral PL-01; post sample (16.7 / 3.6 / 2939)
PS-10	SVG	2.9	HD, SV	PPS	20.9	0	11.5	2.4	5837	10-28-15 1250	SVG-PS10-03			129.4 ft south of MH-04, associated with potential pipe break (PB-02); post sample (11.3 / 3.2 / 5772)
PS-11	SVG	1.5	HD, SV	PPS	20.9	0.2	20.8	0.4	7400	10-28-15 1305	SVG-PS11-02			172.1 ft south of MH-04, located just north of manhole MH-05; post sample unavailable due to water in tubing
PS-12	SVG	1.0	HD, SV	PPS	20.9	0.2	16.6	2.2	5042	10-28-15 1340	SVG-PS12-01			209.2 ft south of MH-04; shallow sample point due to hammer drill failure; post sample (17.5 / 2.8 / 5230)
PS-13	SVG	1.0	HD, SV	PPS	20.9	0.2	20.9	0.4	600	10-28-15 1405	SVG-PS13-01			264.7 ft south of MH-04; adjacent to MH-06; post sample (16.4 /2.8 / 700)
PS-14	SVG	1.3	HD, SV	PPS	20.9	0.2	18.6	0.6	500	10-28-15 1415	SVG-PS14-01			313.5 ft south of MH-04; shallow sample point due to hammer drill failure; post sample (20.9 / 0.0 / 500))

Notes:
ppm- parts per million
ppbv-parts per billion per volume
PID- photo ionization detector
ug/m^3 - micrograms per cubic meter
PCE - Tetrachloroethene
TCE - Trichloroethene

(1) Sample Location
BP- Bartels Place
PS -Pine Street
MR- MetroNorth Property
ST#- Structure 1 or 10

(2) Sample Type
SVG- Soil Vapor Grab
SA- Sewer Line Air
IAS- Indoor Air Screening
AA- Ambient Air

(3) Excavation Method
SV- Shop Vac
AK- Air Knife
HA- Hand Auger
GP- hand geoprobe
HD- Hammer Drill

(4) Sampling Method
PPS- push point sampler
PRT- post run tubing
HSS- Hapsite Screening

Sampled By: ____Nate Vogan_____Reviewed By: _____

Surveyed	All points
	SA-RP01-09
SA-BP01-08	SA-BP01-08
SA-PS01-10	SA-PS01-10
SA-PS02-11	SA-PS02-11
	SA-PS03-08
SA-PS04-10	SA-PS04-10
SA-PS05-12	SA-PS05-12
SVG-BP02-03	SVG-BP02-03
SVG-BP03-03	SVG-BP03-03
SVG-BP04-03	SVG-BP04-03
SVG-BP05-03	SVG-BP05-03
SVG-BP06-03	SVG-BP06-03
SVG-BP07-03	SVG-BP07-03
SVG-BP08-03	SVG-BP08-03
SVG-BP09-03	SVG-BP09-03
	SVG-BP10-03
	SVG-BP11-03
	SVG-BP12-03
	SVG-BP13-04
	SVG-BP14-03
	SA-BP15-03
	SVG-BP16-03
SVG-BP17-03	SVG-BP17-03
	SVG-BP18-03
	SVG-PS06-06
	SVG-PS07-06
	SA-PS08-06
SVG-PS09-03	SVG-PS09-03
SVG-PS10-03	SVG-PS10-03
	SVG-PS11-02
	SVG-PS12-01
	SVG-PS13-01
	SVG-PS14-01

Points to manually adjusts

SA-RP01-09
SA-PS03-08
SVG-BP10-03
SVG-BP11-03
SVG-BP12-03
SVG-BP13-04
SVG-BP14-03
SA-BP15-03
SVG-BP16-03
SVG-BP18-03
SVG-PS06-06
SVG-PS07-06
SA-PS08-06
SVG-PS11-02
SVG-PS12-01
SVG-PS13-01
SVG-PS14-01

APPENDIX B.1

SOIL, BEDROCK, SLUDGE SAMPLING FIELD DATA RECORDS

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MS-501
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 1
Boring Location: INSIDE SITE BUILDING	Refusal Depth: 2.7' BGS	Total Depth: 2.8'	Bore Hole ~~ID~~/OD: 2.5"
Weather: 65°F, SUNNY	Soil Drilled: 2.7' BGS	Method: DIRECT PUSH	Casing Size: —
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MacroCore
Driller: BOB HAMMOND	Date Started: OCT. 17, 2015	Date Completed: Oct-17, 2015	Sampler ~~ID~~/OD: 2.5"
Rig Type/Model: ### 6610 DT	Logged By: BAS	Checked By: JR 11/3/15	
Reference Elevation:	Water Level: ≈ 1.5' BGS	Time: 1630	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0					40.1			0-0.4: CONCRETE/AGGREGATE CORE		← BUILDING FLOOR
								0.4-2.7: LT BROWN TO DK BROWN M/C SAND & GRAVEL; GRAVEL CONSISTENT W/ PARENT BR, WELL ~~GRADED~~, WET, NP		
1		2.3								
2	S1 @	1.8						DENSE;	SW	
3	1645							MACROCORE REFUSAL @ 2.7' BGS; = Bottom of boring @ 2.8' BGS		
4										
5										
	S2 @							DRY		
10										

NOTES: MONITORING BREATHING ZONE WHILE DRILLING INSIDE (VENTING EXHAUST OUTSIDE VIA PIPING):
CO: Ø H2S: 6
O2: 21.1 LEL: Ø

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: GS-502
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06	Client: NYSDEC	of: 1
Boring Location: INSIDE SITE BUILDING	Refusal Depth: 2.8' BGS	Total Depth: 2.8' BGS
Weather: 60°F, SUNNY	Soil Drilled: 2.8' BGS	Method: HAND TOOLS
Subcontractor: Aztech Technologies		Protection Level: D
Driller: BOB HAMMON	Date Started: OCT. 17, 2015	Date Completed: OCT 17, 2015
Rig Type/Model: ### GEOPROBE HANDTOOLS	Logged By: BAS	Checked By: BR 11/3/2015
Reference Elevation:	Water Level: > 2.8' BGS	Time: 1730

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0					NA			0-0.5' CONCRETE & AGGREGATE		← BUILDING FLOOR
1					0.0			0.5' : BROWN TO LT BROWN F/C SAND & GRAVEL, WELL GRADED, BRICK PRESENT @ 1.5', MOIST, NP, DENSE;	SW	
2	S1 @ 1720	NA						FILL ?		★ COLLECTED SOIL SAMPLE @ 2.1' BGS 20109-GS502003 @ 1720
3								REFUSAL @ 2.8' BGS W/ HANDTOOLS; LIKELY NOT BEDROCK		
4										
5										
10	S2 @									

NOTES: MONITORING BREATHING ZONE W/ 4-GAS METER:
O_2: 21.0 CO: 0
LEL: 0 H_2S: 4

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: MS-504
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06	Client: NYSDEC	of: 2
Boring Location: EASTERN SIDE OF SITE BUILDING	Refusal Depth: 18.2' BGS	Total Depth: 18.2'
Weather: 40°F, SUNNY	Soil Drilled: 14.8'	Method: DIRECT PUSH
Subcontractor: Aztech Technologies		Protection Level: D
Driller: BOB GRAMMON	Date Started: OCT. 18, 2015	Date Completed: OCT 18, 2015
Rig Type/Model: ### Geo 10 DT	Logged By: BAS	Checked By: 11/3/15
Reference Elevation:	Water Level: —	Time: —

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0					40.1			0-0.1 CONCRETE & AGGREGATE @ FLOOR		
					0.5			0.1-5 OLIVE BROWN F SAND w/ SILT & ~~w/~~		
1					3.9		+	FEW M/C SAND, TRACE GRAVEL, POORLY GRADED		COLLECTED SOIL VOC SAMPLE @ 1.2-1.5' BGS 360109-MS504001 @ 0845
	S1 @ 0845	5.0'/3.6'			4.3			SP, MDENSE, MOIST, Fill ?		
					5.9				SP/SM	
					4.8					
					8.9					
					10.9					
5					11.5		AR			COLLECTED SOIL VOC SAMPLE @ 4.8' BGS 360109-MS504005 @ 0850
					2.8			5-8.5 OLIVE BROWN F/M SAND w/ SOME SILT & TRACE GRAVEL, POORLY GRADED M DENSE,		
4					3.7			MOIST, SP, MORE GRAVEL @ ~8'	SP/SM	
7	S2 @ 0855	5.0'/4.1'			5.1			8.5-10 GREY/OLIVE GREY F SAND, FEW M SAND & GRAVEL, POORLY GRADED, DENSE, NP, MOIST		
					7.8					
					12.5				GP	
8					12.7		DUP			COLLECTED SOIL VOC SAMPLE @ 8' BGS 360109-MS504008 @ 0900
9					1.9					
					1.7				SP	
10					2.0					

NOTES: MONITORING BREATHING ZONE w/ 4-GAS METER (EXHAUST IS VENTED OUTSIDE)
LO: 0 LEL: 0
O2: 20.9 H2S: 0

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MS-574
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: SITE BUILDING (EAST)	Refusal Depth: 18.2' BGS	Total Depth: 18.2' BGS	Bore Hole ID/OD:
Weather: 40'F, SUNNY	Soil Drilled: 14.8' BGS	Method: DIRECT PUSH	Casing Size:
Subcontractor: Aztech Technologies		Protection Level: D	Sampler:
Driller: BOB HAMMON	Date Started: OCT. 18, 2015	Date Completed: OCT. 18, 2015	Sampler ID/OD:
Rig Type/Model: 6610DT	Logged By: BAS	Checked By: [signature] 11/3/15	
Reference Elevation:	Water Level:	Time:	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10					0.9			10-14.8 GREY TO LT GREYISH OLIVE, F/M SAND FEW C SAND, TRACE GRAVEL/SILT, POORLY GRADED, SP, VERY DENSE, MOIST/DRY, NO ODOR-	SP	
	S3 @ 0910	5.0'/3.4'			0.7			14.8-15 BLACK TO GREY TO WHITE WEATHERED BEDROCK, FRIABLE & ALMOST SOIL IN PROPERTIES;		
					0.3					
					0.3					
					0.2					
					0.1					
15					0.1					WEATHERED BEDROCK
					40.1			15-18.2 WEATHERED BEDROCK, SHIST, PROPERTIES OF A M SAND; WHITED BLACK TO GREENISH GREY TO IRON STAINED (~17.5-18) TO BE GREY, QUARTZ & MICA;		
16	S4 @ 0940	3.2'/3.2'								
17										
18										
								MACROCORE REFUSAL @ 18.2' BGS = Bottom of Boring		
20										

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: 4S-505
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06	Client: NYSDEC	of: 2
Boring Location:		
Refusal Depth: —	Total Depth: 26.5' BGS	Bore Hole ID/OD: 4-inch × 2.5 inch
Weather: 50°F, CLOUDY / BREEZY		
Soil Drilled: 15.5 BGS	Method: DIRECT PUSH	Casing Size: 4" (~12.2')
Subcontractor: Aztech Technologies	Protection Level: D	Sampler: 5' MacroCore
Driller: BOB HAMMON		
Date Started: OCT. 18, 2015	Date Completed: Oct 21, 2015	Sampler ID/OD: 2.5 inch
Rig Type/Model: ### 6610DT		
Logged By: BAS	Checked By: [signature] 11/3/15	
Reference Elevation:		
Water Level: —	Time: —	

Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)		Sample Description and Classification	USCS Group Symbol	Remarks
0.0				N.A		0-0.5' CONCRETE & AGGREGATE SIDEWALK.		
						0.5-2.5: BROWN SAND & GRAVEL w/ BRICKS & ASPHALT → HAND CLEARED TO 2.5' bgs	SP/GP/Fill	
				N.A ↓		2.5-5 BROWN TO GRAYISH BROWN M SAND & GRAVEL, FEW F/C SAND; COBBLE @ 3.5'. POORLY GRADED, DENSE, NP, MOIST TO DRY		
2.5	S1 @ 1250	2.5' / 2.3		3.7			SP	
				30.5				COLLECTED SOIL SAMPLE @ 4S-505 @ 3.2-3.5' bgs
				~~5.0~~ 50.7	(*)		GP	
				NA			SP	360109-4S505003 @ 1255
				33.6				
5				38.5				
				37.5		5-10 BROWN TO OLIVE BROWN F/C SAND, SOME GRAVEL, MOIST, POORLY GRADED, DENSE, NO ODOR, MORE SILT FROM 9-10' bgs		
				30.5			SP	
	S2 @ 1300	5.0 / 4.8		42.7				
				50.5				
				43.4				COLLECTED SOIL VOC SAMPLE @ 4S-505 @ 9' bgs
				53.7				360109-4S505109
				60.5	(*)			@ 1305
10				38.5			SP/SM	

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MW-505
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: EASTERN SIDE OF SITE BUILDING	Refusal Depth: —	Total Depth: 26.5' BGS	Bore Hole ID/OD: 4-INCH & 2.5 INCH
Weather: 55°F, SUNNY / WINDY	Soil Drilled: 15.5'	Method: DIRECT PUSH	Casing Size: 4-INCH (~12.2' bgs)
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: BOB HAMMON	Date Started: OCT 18, 2015	Date Completed: 10/21/15	Sampler ID/OD: 2.5-INCH
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: 11/3/15	
Reference Elevation:	Water Level: —	Time: —	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
10					30.5			10-12.8' · OLIVE BROWN SILTY F SAND, SOME M/C SAND, FEW GRAVEL, MOIST, NP, NO ODOR;		
11	S3 @ 13'15	2.8'/2.7'			38.6			MEDENSE TO DENSE;	SP/SM	
12					41.5					
					63.2					
					70.2					COLLECTED SOIL VOC SAMPLE @ 12' BGS 360104-MS505012 @ 1325
					75.3		⊗	MACROCORE REFUSAL @ 12.8' BGS; ADVANCING 4 1/4-INCH AUGERS DOWN TO BEDROCK & THEN WILL SET UP TO CORE INTO ROCK 5';		
								OCT. 20, 2015 → AUGERED (4 1/4-INCH ID) TO BEDROCK (REFUSAL) @ 12.3' BGS; BEGINNING TO ROLLERBIT ~5' TO CONFIRM BEDROCK & SET HYBRID WELL		
15										
								OCT 21, 2015: CORED THROUGH 1' BOULDER FROM 12.5-13.5' BGS; → WAS NOT ABLE TO ADVANCE CASING THROUGH BOULDER → ROLLERBIT TO ~26.5'; • ENCOUNTERED WEATHERED BEDROCK FROM 15.5' TO 26.5' BGS • AZTECH HAS NO MORE RODS FOR ADVANCING ROLLERBIT, SO ATTEMPTING TO INSTALL MONITORING WELL IN OPEN BORING • DID NOT ENCOUNTER 'COMPETENT' OR 'HARDER' BEDROCK.		CORE RUN TIMES: N/A
20										
20 24.5								→ Bottom of boring = 26.5' - No refusal		

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: GS-506
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: SOUTH END OF SITE BUILDING	Refusal Depth: 19.0' BGS	Total Depth: 19.0' BGS	Bore Hole ID/OD: 2.5-INCH
Weather: 60°F, SUNNY	Soil Drilled: 19.0' BGS	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT. 21, 2015	Date Completed: 10/21/2015	Sampler ID/OD: 2.5-INCH
Rig Type/Model: ### 6610 DT	Logged By: BAS	Checked By: 11/3/15	
Reference Elevation:	Water Level: 11.5' BGS	Time: 0900	

Sample Information					Monitoring					
Depth (feet bgs) 0.0	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
					2.1			0-0.3 CONCRETE/AGGREGATE → SIDEWALK		
1								0.3-0.8 ASPHALT, BRICK, BACKFILL	SW/F, II	
2		5.0 / 4.0						0.8-3 BROWN TO OLIVE BROWN SILTY F SAND, FEW GRAVEL, DENSE, WELL GRADED, SP, MOIST		
3	S1 @ 1150						(*)	3-5 BROWN F/M SAND, FEW GRAVEL, TRACE SILT, DRY, M DENSE, NO ODOR		(*) RECOVERED SOIL SAMPLE @ 3.2' BGS GS-506 NOMINAL BOTTOM DEPTH OF SEWER LINE
4									SP/F, II	PB0109-GS-506003 @ 1150
5										
					2.0.1			5-6 OLIVE BROWN F/C SAND & GRAVEL, WELL GRADED, MOIST, SP, M DENSE	SW/F, II	
								6-6.5 ASPHALT & CONCRETE → FILL		
	S2 @ 0815	5.0' / 5.0'						6.5-8.5 OLIVE BROWN F/M SAND, FEW C SAND, TRACE SILT & F GRAVEL, MOIST, NP, POORLY GRADED	NA	
								8.5-9 COBBLE, WEATHERED BEDROCK FRAGMENT	SP	
								9-10 OLIVE BROWN FINE SAND W/ SOME SILT, SP, POORLY GRADED, DENSE, MOIST, VERY FAINT ODOR		
10									SM	

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MS-506
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: SOUTH OF SITE BUILDING	Refusal Depth: 19.0'	Total Depth: 19.0'	Bore Hole ID/OD: 2.5-INCH
Weather: 60°F, SUNNY	Soil Drilled: 19.0'	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT 21, 2015	Date Completed: OCT 21, 2015	Sampler ID/OD: 2.5-INCH
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: JRunkiffg 11/3/15	
Reference Elevation:	Water Level: ~11.5' bgs	Time: 0900	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10					479.5		(1)	10-15 IRRIDESCENT TO SILVER TO OLIVE TO ~~OLIVEISH BROWN~~ F/M SAND, FEW GRAVEL & TRACE SILT, POORLY GRADED, MOIST, VERY STRONG ODOR, SP, DENSE TO MDENSE		
					463.2					COLLECTED SOIL VOC SAMPLE @ MS-506 10.8-11.2' bgs 360109-MS506011 & 360109-MS506011D @ 1430
	S3 @ 0825	5.0 / 2.2			402				SP	
					369					
					332					
15					198.5					
					862.		(2)	15-15.8 IRRIDESCENT TO OLIVE F SAND, POORLY GRADED, MOIST, VERY STRONG ODOR, NP, DENSE	SP	
					432			15.8-19 BROWN TO OLIVE BROWN F/M SAND, FEW GRAVEL, MOIST TO WET, NP, MDENSE TO DENSE, WEATHERED BEDROCK @ 17.9' POORLY GRADED		COLLECTED SOIL VOC SAMPLE @ MS-506 15.5-15.7' bgs 360109-MS506016 @ 1545
	S4 @ 0845	4.0 / 5.0 / 3.9			185					
					101					
					89.1				SP	
					33.5					
					22.5					
					4.0					
								MACROCORE REFUSAL @ 19' bgs = Bottom of boring		
20										

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: GS-507
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: S OF SITE BUILDING	Refusal Depth: NA	Total Depth: 20'	Bore Hole ID/OD: 2.5-INCH
Weather: 62'F, SUNNY	Soil Drilled: 20'	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT 21, 2015	Date Completed: OCT 21, 2015	Sampler ID/OD: 2.5-INCH
Rig Type/Model: ### GEO DT	Logged By: BAS	Checked By: JRawl 11/3/15	
Reference Elevation:	Water Level: ~9' BMS	Time: 1030	

Sample Information: Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	Monitoring: PID Headspace Reading (ppm)	Sample Description and Classification	USCS Group Symbol	Remarks
0.0			10.1	0-0.3' - CONCRETE & AGGREGATE → SIDEWALK 0.3-0.5 ASPHALT & BRICK		
	S1 @ 0950	5.0 / 3.7	0.2 0.3	0.5-2.5 OLIVE TO REDDISH BROWN F SILTY SAND, TRACE GRAVEL, MOIST, SP/MP, DENSE, 2.5-5 BROWN TO REDDISH BROWN F/M SAND SOME F GRAVEL, POORLY GRADED, MOIST TO DRY NP, COMPACT TO LOOSE, NP	SM / SP / SP	F, I, I COLLECTED SOIL SAMPLE NEAR BOTTOM OF SEWER LINE 2.5'-3.0' BGS 360109-GS507-02 0955 F, I
5						
	S2 @ 1000		0.5 0.9 3.5 7.8 7.8 UNK (X)	5-6 : SAME AS 2.5-5 6-6.5 CONCRETE & ASPHALT 6.5-9 BROWN TO OLIVE BROWN M SAND, POORLY GRADED, MOIST, NP, COMPACT, FAINT ODOR 9-10 GREYISH OLIVE, F SAND, FEW SILT, POORLY GRADED, MOIST, COMPACT, NP ODOR	SP / SP / SP	F, I, I COLLECTED SOIL VOC SAMPLE @ 9.2-9.6' BGS (TOP OF CONT.) 360109-GS507-09 1000
10						

NOTES: (X) PID NOT WORKING CORRECTLY

BAS

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: GS-507
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: S OF SITE BUILDING	Refusal Depth: N/A	Total Depth: 20'	Bore Hole ID/OD: 2.5-INCH
Weather: 70°F, SUNNY	Soil Drilled: 20	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT 21, 2015	Date Completed: OCT 21, 2015	Sampler ID/OD: 2.5-INCH
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: J Rudloff 11/3/15	
Reference Elevation:	Water Level: ~9' BGS	Time: 1030	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10					325			10-14.5 GREYISH OLIVE TO IRA DECENT F/C SAND OF LITTLE GRAVEL, POORLY GRADED, MOIST, VERY STRONG ODOR, NP, COMPACT.	SP	
					281					
	S3	5.0			352					
12	@	/			421			14.5-15 OLIVE BROWN F/M SAND, COMPACT TO DENSE, MOIST, NP		COLLECTED SOIL VOC SAMPLE @ GS-507 12.2-12.5' BGS 360109-65507012 @1015
	1010	4.1			139					
					149					
					63.5					
15					47.5				SP	
					55.1			15-20 BROWN TO REDDISH BROWN F/M SAND, FEW SILT, SOME FGRAVEL, COBBLE (QUARTZ) @ 18.5' BGS, POORLY GRADED, MOIST TO WET, NP, DENSE		
					39.7					
					22.5					
	S4	5.0			8.9				SP	
	@	/			4.6					
	1030	4.7			3.7					
					1.8					
					0.7					
					0.8					
20					0.8			Bottom of boring = 20'6S - No Refusal		

NOTES:

RAY

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MS-508
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: S OF SITE BUILDING	Refusal Depth: 16.8' BGS	Total Depth: 16.8' BGS	Bore Hole ID/OD: 2.5-INCH
Weather: 70°F, SUNNY	Soil Drilled: 16.8' BGS	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT 21, 2015	Date Completed: OCT 21, 2015	Sampler ID/OD: 2.5 INCH
Rig Type/Model: ### 6610 DT	Logged By: BAS	Checked By: JHamilton 11/3/15	
Reference Elevation:	Water Level: ~11' BGS	Time: 1130	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0					20.1			0-0.3' CONCRETE SIDEWALK 0.3-0.4 ASPHALT & BRICK		
	S1 @ 1055	5.0' / 3.7			0.3 0.4 0.5			0.4-2.5 REDDISH BROWN ~~FSAN~~ SILTY F SAND, POORLY GRADED, SP, MOIST, COMPACT 2.5-5 BROWN TO REDDISH BROWN, M SAND FEW FSAND & F GRAVEL, POORLY GRADED MOIST, COMPACT TO LOOSE, NP	SM/FILL SP/FILL	
5										
	S2 @ 1040	5.0 / 5.0			0.3 0.4 0.1 0.2 0.1			5-6 SAME AS 2.5-5 6-6.6 CONCRETE & ASPHALT 6.6-9.5 BROWN TO OLIVE BROWN F/C SAND W/ LITTLE GRAVEL, WELL GRADED, COMPACT MOIST, NP 9.5-10 OLIVE BROWN F/M SAND W/ SOME SILT & FEW GRAVEL, MOIST, M DENSE, NP/SP, FAINT ODOR	SP/FILL SW	
10					0.2				SP	

NOTES:
~7' SOUTH OF MS-506

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: MS-568
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: ~7' SOUTH of MS-566	Refusal Depth: 16.8' BGS	Total Depth: 16.8' BGS	Bore Hole ID/OD: 2.5-INCH
Weather: 70°F, SUNNY	Soil Drilled: 16.8' BGS	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACROCORE
Driller: RAY HAMMOND	Date Started: OCT 21, 2015	Date Completed: OCT 21, 2015	Sampler ID/OD: 2.5-INCH
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: JRuffo 11/3/15	
Reference Elevation:	Water Level: ~11' BGS	Time: 1130	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
10					1.9			10-13.5 BROWN TO OLIVE BROWN TO TAN F/C SAND & SOME GRAVEL, COBBLES @ 11', WELL GRADED, NP, MOIST, MDENSE TO COMPACT, V. FAINT ODOR @ ~13'	SW	
					2.2					
					1.7					
	S3 @ 1050	5.0/4.9			3.7					COLLECTED SOIL VOC SAMPLE @ MS-568 @ 8.2' BGS 760107-45508613 @ 1055
					8.9		(*)	13.5-15 BROWN TO OLIVE BROWN F SAND FEW M/C SAND, SOME GRAVEL, POORLY GRADED, MOIST, DENSE,		
					0.8					
					0.9					
					0.5				Sp	
15					0.7					
					0.1			15-16.8 BROWN TO OLIVE BROWN SAT SILTY SAND, FEW GRAVEL, POORLY GRADED, WET, LOOSE, NO ODOR		
					0.2				Sp	
16.8	S4 @ 1055	1.8/5.0			0.1					
								Bottom of boring = 16.8' BGS Refusal with Direct Push		
20										

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: SS-301
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06	Client: NYSDEC	of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0
Weather: 70° Mclowny	Soil Drilled: 15.0	Method: Direct Push
Subcontractor: Aztech Technologies		Protection Level: D
Driller: Rey	Date Started: 10/22/15	Date Completed: 10/23/15
Rig Type/Model: ### 6610	Logged By: (MW) ~~BAS~~ NW	Checked By: JPP 12/7/15
Reference Elevation:	Water Level: NM	Time: NA

Sample Information				Monitoring		Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)				
0.0		5.0/ 0.9		0.0		Brownish black to moderate brown; poorly graded sand w/ gravel; trace 1" angular crushed stone + coal fragments; moist dense; no staining, no odors	Fill	
5	S1 @							
		5.0/ 2.0		0.0		Moderate brown; poorly graded sand; trace mc subrounded gravel; moist; medium dense	SP	Sample at 6.0 (Dup taken) 360109-SS- 301006 → @1240 301006D → @1240
10	S1 S2 @							

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: SS-301
Project Location: New Rochelle, New York		Page No. 2
Project No.: 3612112221.06	Client: NYSDEC	of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0
Weather: 70° Mcloudy	Soil Drilled: 15.0	Method: Direct Push
Subcontractor: Aztech Technologies		Protection Level: D
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15
Rig Type/Model: 6610	Logged By: MW ~~BAS~~ NW	Checked By: JPP 12/7/15
Reference Elevation:	Water Level: NM	Time: NA
		Bore Hole ID/(OD): 2.25
		Casing Size: NA
		Sampler: 5' Macrocore
		Sampler ID/OD: 1.5/2.25

Sample Information				Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10									
	SS-301 @ 10.0	5.0 / 2.9					~~WC~~ moderate brown; well graded sand, little to trace fm rounded gravel; trace silt; moist to wet; dense; no odors, no staining	~~SM~~ SM	Samples at 10.0 and 12.0 ① 360109-SS-301011 @ 1242 ② 360109-SS-301012 @ 1245
	SS-302 @ 12.0								
15									
							EoB at 15.0 ft bgs • Install 1" PVC w/ screen (0.010") to collect grab water sample - screen: 5-15 ft bgs		
20									

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-400
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/OD: 2.25
Weather: 68° Mcbudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Roy	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: ### 6610 DT	Logged By: ~~MDBAS~~ NMV	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0		5.0/ 0.8			0.0			Brownish black; poorly graded sand w/ gravel (fm angular); little large 1" crushed stone; moist, dense; no staining, no odor	Fill	Sample at 0-3 360109-SS-400000 @ 12:18
	S1 @ 1218									
5		5.0/ 0.3			0.0			Poor recovery; poorly graded sand; moderate brown; trace silt; moist, dense, no odors, no staining	SP	Sample at 5.1 360109-SS-400005 @ 12:21
	S2 @ 1221									
10										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-400
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/OD: 2.25
Weather: 68° Mclowy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Pat	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610	Logged By: ~~BAS~~ MW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
10		50/31			0.0			10-10.3 SAA 10.3-13.1 moderate brown w/ some grayish brown; well graded sand w/ gravel (f, rounded); trace gravel + silt; moist to wet; dense, no staining, no odor	SP SW-SM	Sample at 12.0 360109-SS-400012 @ 1225
	SS @ 1225									
15										
20								EOB at 15.0 ft bgs JPP		

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-401
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/(OD) 2.25
Weather: 68° M cloudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: ### 6610DT	Logged By: (NV) ~~DAS~~ NW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information				Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0									
		5.0/ 1.0		0.0			Brownish black; poorly graded sand w/ gravel; little crushed stone; trace coal fragments; moist; medium to dense; no staining, no odor	FILL	Soil sample at 0.4 360109-SS-401000 @ 11:00
	S1 @ 1100								
5									
		5.0/ 0.9		0.0			~~5-5.1 SAA (sluff)~~ (NV) sluff 5.1-5.9 Poorly graded sand w/ gravel; moderate brown; little large 1" diameter gravel; moist; dense; no staining, no odor	Fill SP	Soil sample at 5.5 360109-SS-401006 @ 12:05
	S2 @ 1205								
10									

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-401
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/OD: 2.25
Weather: 68° Mclowy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5/2.25
Rig Type/Model: 6610	Logged By: ~~BAS~~ MW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10										
		5.0 / 3.5			0.0			Grayish brown to moderate brown; well graded sand w/ silt, little to trace f rounded gravel; moist; dense; no staining, no odor	SW-SM	Soil sample at 10.7 360109-SS-401011 @ 12:10
	SS @ 1210									
15										
								EOB at 15.0 ft bgs JPP		
20										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: SS-402
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06	Client: NYSDEC	of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0
Weather: 66° Mclouty	Soil Drilled: 15.0	Method: Direct Push
Subcontractor: Aztech Technologies		Protection Level: D
Driller: Roy	Date Started: 10/22/15	Date Completed: 10/22/15
Rig Type/Model: ### 6610DT	Logged By: ~~BAS~~ NW	Checked By: JPP 12/7/15
Reference Elevation:	Water Level: NM	Time: NA
		Bore Hole ID/(OD) 2-25
		Casing Size: NA
		Sampler: 5' Macrocore
		Sampler ID/OD: 1.5 / 2.25

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0		5.0/ 1.3						Brownish black; poorly graded Sand w/ gravel; little fine gravel; trace coal fragments + crushed rock; moist, med dense; no staining, no odor	Fill	soil sample at 1.0 360109-SS-402000 @ 11:35
5	S1 @ 1135									
		5.0/ 1.3						5-5.4 SAND (possible fill) 5.4-6.8 moderate brown; poorly graded Sand w/ gravel; little to some fine subrounded gravel; moist, dense; no staining, no odor	Fill / SP	soil sample at 6.0 360109-SS-402006 @ 11:40
10	S2 @ 1140									

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-402
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/(OD) 2.25
Weather: 66° Mcloudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610	Logged By: ~~BAS~~ MV	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10										
	SS C 1145	5.0 / 4.1						10-11.4 SAA 11.4-14.1 grayish brown; well graded sand w/ silt; little to trace f rounded gravel; trace organics; wet; dense; no odors, no stains,	SP SW-SM	Soil Sample at 11.2 360109-SS-402011 @ 11:45
15										
								EOB at 15.0 ft bgs JPP		
20										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-403
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/(OD) 2.25
Weather: 65° Mcloudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macro core
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5/2.25"
Rig Type/Model: ### 66DT	Logged By: ~~BAS~~ NW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0										
		5.0/ 2.0			0.0			grayish black to brownish black; poorly graded sand w/ gravel; little crushed run stone + coal fragments; moist; medium dense, no odor — no staining	Fill	sample at 1.6 ft bgs 360109-SS-403000 @ 11:10
	S1 @ 1110									
5										
		5.0/ 1.6			0.0			medium brown; poorly graded sand w/ gravel; little to trace fm rounded gravel; moist; dense; no staining, no odor	SP	Sample at 5.6 360109-SS-403006 @ 11:15
	S2 @ 1115									
10										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-403
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/OD: 2.25
Weather: 65° Mclouds	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Roy	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610	Logged By: ~~BAS~~ JW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information				Monitoring		Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)				
10		5.0 / 3.2		0.0		10-10.6 SAA 10.6-13.2 grayish brown; well graded Sand w/ silt; trace f rounded gravel + organics; wet; dense; no staining no odor	SP / SW-SM	Soil sample at 12.0 MS/MD Taken 360109-SS-403012 (MS/MD) @11:20
15	SS @ 1120							
20						EOB at 15 ft bgs JPP		

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-404
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/(OD) 2.25
Weather: 65° Mclowny	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: ~~2.5~~ 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: ### 6610DT	Logged By: ~~BAS~~ MW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring						
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
0.0										
		5.0 / 1.3			0.0			0-0.7 Crusher run 0.7-1.3 brownish black; poorly graded Sand w/ gravel; little to trace coal fragments; trace glass; dry to moist; med. dense; no staining, no odors	Stone / FILL	Soil sample taken at 0.9 360109-SS-404000 @ 10:45
	S1 @ 1045									
5										
		5.0 / 1.8			0.0			Medium brown; poorly graded sand w/ gravel (fm); little to trace C gravel (subrounded); moist; dense; no staining no odors	SP	Soil sample at 6.3 360109-SS-404006 @ 10:50
	S2 @ 1050									
10										

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-404
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/OD: 2.25
Weather: 65° M cloudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610 DT	Logged By: BAS	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information				Monitoring		Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)		PID Headspace Reading (ppm)				
10								
		5.0 / 3.5		0.0		10-11.9 SAA 11.9-13.5 greyish brown; well graded sand w/ silt; trace f rounded gravel & organics; wet to moist; med. dense; no staining; no odors	SP SW-SM	Sample at 10.5' 360109-SS-404011 @10:55
	SS @ 1055							
15								
						EOB at 15.0 ft bgs		
						JPP		
20								

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-405
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: 12.5	Total Depth: 12.5	Bore Hole ID/OD: 2.25
Weather: 63° M cloudy	Soil Drilled: 12.5	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: ### 66k DT	Logged By: ~~BAS~~ MW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0										
	S1 @ 1025	5.0 / 1.9			0.0			Brownish black; poorly graded sand w/ gravel; little to some fine gravel; little coal fragments; moist to dry; dense; no staining no odor	Fill (SP)	soil sample at 1.3 360109-SS-405000 @ 10:25
5										
	S2 @ 1030	5.0 / 3.5			0.0			5-5.3 SAA 5.3-8.5 Moderate brown; poorly graded sand w/ gravel; little fn gravel (subrounded); trace c rounded gravel; moist; wet at 7.5; medium dense; no staining, no odor	SP	soil sample at 7.5 360109-SS-405008 @ 10:30
10										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-405
Project Location: New Rochelle, New York			Page No. 2
Project No.: 3612112221.06	Client: NYSDEC		of: 2
Boring Location: MNR	Refusal Depth: 12.5	Total Depth: ~~15.0~~ 12.5	Bore Hole ID/OD: 2.25
Weather: 63° M Cloudy	Soil Drilled: 12.5	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610 DT	Logged By: ~~BAS~~ NM	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring					
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)			Sample Description and Classification	USCS Group Symbol	Remarks
10		5/2.5			0.0			10 - 11.3 SAA 11.3 - 12.5 grayish brown; well graded sand w/ silt; little to trace f rounded gravel; wet; medium dense; no staining; no odor	SP SW-SM	soil sample at 11.5 Saturated zone 360109-SS-405012 @ 10:35
15	SS @ 1035									
20								Refusal at 12.5 ft bgs EOB JPP		

NOTES:

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-406
Project Location: New Rochelle, New York			Page No. 1
Project No.: 3612112221.06	Client: NYSDEC		of: 1
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15-0	Bore Hole ID/OD: 2.25
Weather: 56° M Cloudy	Soil Drilled: 15-0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 4.5 / 2.25
Rig Type/Model: ### 6610 DT	Logged By: ~~BAS~~ NMU	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0										
	S1 @ 0955	5.0/ 1.2			0.0			Poor recovery; brownish black; poorly graded sand w/ gravel; Fill; some fine angular gravel; trace coal fragments; dry to moist, dense; no staining, no odor	Fill (SP)	Sample taken at 0.8 ft Sandy Lense 360109-SS406000 @09:55
5										
	S2 @ 1000	5.0/ 2.0			0.0			Moderate brown to light yellowish brown; poorly graded sand w/ gravel; SP; some to little fine subrounded gravel; moist; dense; no staining; no odor	SP	Sample taken at 5.8 ft 360109-SS-406006 @ 10:00
10										
	S3 @ 1010	5.0/ 3.7			0.0			10-11.1 SAA, becoming wet at 10.5 11.1 - 12.7 grayish brown to light brown; well graded sand w/ silt; some silt; trace clay; moist to wet; dense; no staining, no odor EOB at 15.0 ft bgs JPP	SP Sm-Sm	Sample taken at 10.6 Sat. Sandy Zone 360109-SS-406011 @ 10:10
15										
40										

NOTES:

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI			Boring ID: SS-407
Project Location: New Rochelle, New York			Page No. (MW2) 1
Project No.: 3612112221.06	Client: NYSDEC		of: 1
Boring Location: MNR	Refusal Depth: NA	Total Depth: 15.0	Bore Hole ID/(OD): 2.25
Weather: 56° ; m cloudy	Soil Drilled: 15.0	Method: Direct Push	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' Macrocore
Driller: Ray	Date Started: 10/22/15	Date Completed: 10/22/15	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: 6610	Logged By: ~~BAS~~ MW	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0 ~~10~~										
	S1 @ 0925	5.0 / 2.0			0.0			0-0.8 grayish brown; poorly graded sand w/ gravel (Fill); some to little fine angular gravel; trace silt; dense; moist; no staining no odor 0.8 - 1.7 brownish black; poorly graded sand w/ gravel (Fill); some coal fragments; little fine gravel; trace silt; moist to dry; med dense; no staining, no odor 1.7-2.0 moderate brown; poorly graded sand; SP; little f gravel; moist; dense; no staining no odor	Fill SP	Soil sample at 1.0 360109-SS-407000 @ 09:25
05 ~~15~~										
	S2 @ 0935	5.0 / 2.9			0.0			Moderate brown; poorly graded sand; SP; little fine subrounded to rounded gravel; moist; dense; no staining; no odor	SP	Soil sample collected at 6.0 Take field dup 360109-SS-407006D @ 09:35
10										
	S3 @ 0945	5.0 / 2.6			0.0			10-11.7 SAA, becoming wet at 11.1 11.7 -12.6 brownish gray to light gray; well graded sand w/ silt; some silt; trace f gravel; moist to wet; soft; no staining, no odor	SP SW-SM	Soil sample collected at 11.7 @ 09:45 top of fines 360109-SS-407017
15 ~~20~~										

NOTES:

EOB at 15.0 ft bgs

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: SS-408
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06 act	Client: NYSDEC	of: 1
Boring Location: Metro North	Refusal Depth: NA	Total Depth: 15.0
Weather: 55° M Cloudy	Soil Drilled: 15.0	Method: Direct Push
Subcontractor: Aztech Technologies		Protection Level: D
Driller: Roy	Date Started: 10/22/15	Date Completed: 10/22/15
Rig Type/Model: ### 6610DT	Logged By: ~~BAS~~ NW	Checked By: JPP 12/7/15
Reference Elevation:	Water Level: NM	Time: NA

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)			PID Headspace Reading (ppm)					
0.0					0.0			Dusky brown to moderate brown; poorly graded sand; SP; moist; some fine gravel; little to trace coal fragments; no odor; medium dense	SP	collected soil sample at 1.2 360109-SS-408000 (sandy zone) @08:50
		5.0/1.8								
	S1 @ 0850									
5										
		5.0/1.5			0.0			5.0-5.8 SAA 5.8-7.5 Moderate brown; poorly graded (enf) sand; moist; trace f gravel; dense; no odor; no staining	SP	collected soil sample at 6.6 360109-SS-408007 @08:55
	S2 @ 0855									
10										
		5.0/3.2			0.0			10-11.5 SAA 11.5-12.2 grayish brown; well graded f sand; moist; some silt; little organics soft; no odor, no staining 12.2-15.0 light organgish brown; well graded f sand, moist; some silt; trace rounded 1" gravel; no odor; no staining, soft	SP SW-SM SW-SM	collected soil sample at 11.2 @09:15 Sat. Zone 360109-SS-408011 @
	S3 @ 0915									
X 15										

NOTES:

EOB at 15.0 ft bgs

install PVC w/ screen 5-15ft to take grab water

SOIL BORING LOG Sample

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall - Supplemental RI		Boring ID: US-500
Project Location: New Rochelle, New York		Page No. 1
Project No.: 3612112221.06.10 1	Client: NYSDEC	of: 1
Boring Location: INSIDE SITE BUILDING	Refusal Depth: 7.8'	Total Depth: 7.8'	Bore Hole ID/OD: 2.25
Weather: 65F SUNNY	Soil Drilled: 7.8'	Method: DIRECT PUSH	Casing Size: NA
Subcontractor: Aztech Technologies		Protection Level: D	Sampler: 5' MACRO CORE
Driller: BOB HAMMOND	Date Started: OCT. 17, 2015	Date Completed: OCT 17, 2015	Sampler ID/OD: 1.5 / 2.25
Rig Type/Model: ### GEO DT	Logged By: BAS	Checked By: JPP 12/7/15	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information: Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	Monitoring: PID Headspace Reading (ppm)		Sample Description and Classification	USCS Group Symbol	Remarks
0.0			10.1		0-0.4' CONCRETE & AGGREGATE (CINDERS/COAL/ASH & SLAG);		← SITE BUILDING FLOOR
					0.4-5' LT BROWN TO OLIVE BROWN F/M SAND, SOME/FEW GRAVEL (FINE) CONSISTING OF QUARTZITE/BIOTITE @ THE WEATHERED PARENT BR (SCHIST), POORLY GRADED, MOIST, NP/SP, MODERSE,	SP	
	S1 @ 1440	5.0 / 2.9		A			COLLECTED SOIL SAMPLE @ 3' BGS 360109-US500003 @ 1445
5							
			0.8		5-5.5' OLIVE BROWN F/M SAND, POORLY GRADED, MOIST, SP, VERY FAINT ODOR	SP	
			1.5		5.5-7' GREENISH BROWN F SAND, POORLY GRADED, SP, VERY STRONG ODOR, MOIST, DENSE	SP	
	S2 @ 1450	2.8 / 1.7	30.9		7-7.8' BLACK TO GREY WEATHERED BR (OR BOULDER), VERY STRONG ODOR;		COLLECTED SOIL SAMPLE @ 6.5-6.8' BGS (OBSERVED CONT.) 360109-US500007 @ 1450
			88.5				
			133				
			155	A	MACROCORE REFUSAL @ 7.8' BGS.	WEATHERED BR	COLLECTED SOIL SAMPLE OF WEATHERED BR @ 7.8' 360109-US500008 @ 1500
8							
10							

NOTES: MONITORING BREATHING ZONE WHILE DRILLING INSIDE (VENTING EXHAUST OUTSIDE VIA PIPING);
CO: 0 CEL: 0
O2: 21.2 H2S: 7

SOIL BORING LOG

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Industrial Overall Supplemental RI			Boring ID: GS-503
Project Location: New Rochelle, NY			Page No. 1
Project No.: 3612112221.06	Client: ~~USACE~~ NYSDEC		of: 1
Boring Location: Inside Building Inv	Refusal Depth: NA	Total Depth: 6.6	Bore Hole ID/OD:
Weather: 55° M cloudy	Soil Drilled: 6.6	Method: Hand geoprobe	Casing Size:
Subcontractor: NA		Protection Level: D	Sampler: 2' Macrocore
Driller: NA	Date Started: 10/26/15	Date Completed: 10/26/15	Sampler ID/OD:
Rig Type/Model: Hand geoprobe	Logged By: NW	Checked By:	
Reference Elevation:	Water Level: NM	Time: NA	

Sample Information			Monitoring	Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	NA PID (ppm)			
0.0				0-0.4 concrete slab		
				0.4-1.8 No sample, pre cleared w/ post hole digger	SP	
2.6	1			1.8-2.6 No Sample		
		2.0/1.35	0.0	Dark yellowish brown; poorly graded sand; trace to little fm subrounded gravel; trace silt; moist; dense; no staining no odor	SP	soil sample at 3.1 ft (1703) 360109-GS-503003 @ 17:03
	S1 @ 1703					
4.6						
		2.0/1.6	0.0	SAA	SP	soil sample at ~~6.2~~ 6.2 ft bgs 360109-GS-503006 @ 17:20
	2 (S2) 1720					
6.6				EOB at 6.6 ft bgs		

NOTES:

APPENDIX B.2

MONITORING WELL CONSTRUCTION/DEVELOPMENT FIELD DATA RECORDS

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: MW-501

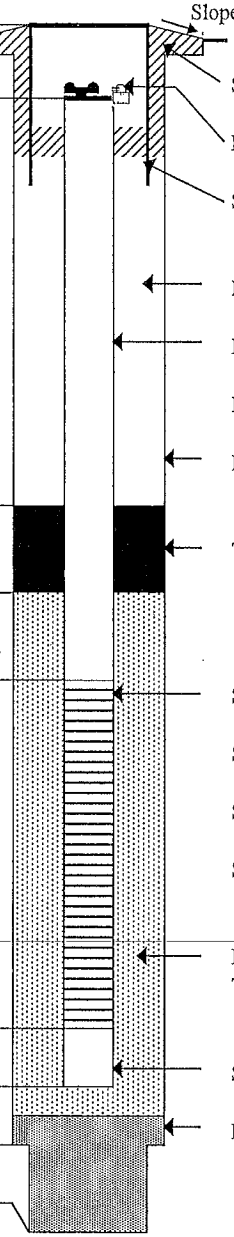
Project Name: Industrial Overall - Supplemental RI
Project Location: New Rochelle, New York
Project Number: 3612112221 Task Number 06.01
Subcontractor: Aztech Technologies Drilling Method: Direct Push
Development Method: PERISTALTIC PUMP Development Date: OCT. 17. 2015
Bucking Posts/Ballards: NA
Notes:

Date Started: OCTOBER 17, 2015 Date Completed: OCTOBER 18, 2015
Logged By: B. SHAW
Checked By: JPP Checked Date: 12/7/16

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft):

Item	Depth BMP (ft)	Elevation (ft)
Surface Casing Elevation	0	76.44
Ground Surface Elevation	0	76.44
Riser Pipe (Top)	~0.1	~76.34
Top of Well Seal	NA	NA
Top of Sand Pack	~0.5' Bls	~75.94
Top of Screen	0.5' Bls	~75.94
Base of Screen	~2.8' Bls	~73.64
End Cap	~2.8' Bls	~73.64
Drilled Depth	2.8'	73.64
Bottom of Exploration	2.8' Bls	73.64
Bedrock Surface	~2.8' Bls	~73.64



Description

Surface Seal Type: CONCRETE
Lock Identification: NA
Stickup Casing Diameter: NA
Backfill/Grout Type: NA
Riser Pipe Type: NA
Riser Pipe ID: NA
Borehole Diameter: 2.5-INCH
Type of Seal: NA
Screen Type: SLOTTED PVC
Screen ID: 1-INCH ~~0.010" x 2'-8"~~
Screen Slot Size: 0.010" x 2.8'
Screen Length: 2.8'
Filter/Sand Pack Type: MON
Sump:
Fallback/Backfill: NA

NOT TO SCALE

MACTEC
511 Congress Street, Portland Maine 04101

WELL/PIEZOMETER CONSTRUCTION DIAGRAM - FLUSHMOUNT

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: MW-501

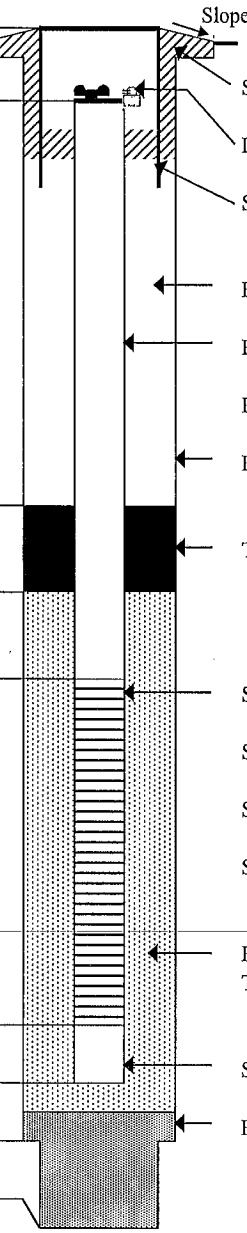
Project Name: Industrial Overall - Supplemental RI
Project Location: New Rochelle, New York
Project Number: 3612112221 Task Number 06.01
Subcontractor: Aztech Technologies Drilling Method: Direct-Push
Development Method: PERISTALTIC PUMP Development Date:
Bucking Posts/Ballards: NA
Notes:

Date Started: OCTOBER 17, 2015 Date Completed: OCTOBER 18, 2015
Logged By: B. SHAW
Checked By: JR Checked Date: 11/3/15
No elevation data yet.

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft):

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation			
Ground Surface Elevation			
Riser Pipe (Top)			
Top of Well Seal	NA		
Top of Sand Pack	~0.5' Bgs		
Top of Screen	0.5' Bgs		
Base of Screen	~2.8' Bgs		
End Cap	~2.8' Bgs		
Drilled Depth	2.8'		
Bottom of Exploration	2.8' Bgs		
Bedrock Surface	~2.8' Bgs		



Surface Seal Type: CONCRETE
Lock Identification: NA
Stickup Casing Diameter: NA
Backfill/Grout Type: NA
Riser Pipe Type: NA
Riser Pipe ID: NA
Borehole Diameter: 2.5-INCH
Type of Seal: NA
Screen Type: SLOTTED PVC
Screen ID: 1-INCH ~~0.010" x 2'~~
Screen Slot Size: 0.010" x 2.8'
Screen Length: 2.8'
Filter/Sand Pack Type: #0N
Sump:
Fallback/Backfill: NA

NOT TO SCALE

MACTEC
511 Congress Street, Portland Maine 04101

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: MW-504

Project Name:	Industrial Overall - Supplemental RI	Date Started:	OCT. 18, 2015 Date Completed: OCT. 18, 2015
Project Location:	New Rochelle, New York	Logged By:	BSHAW
Project Number:	3612112221 Task Number 06.01	Checked By:	JPP Checked Date: 12/7/15
Subcontractor:	Aztech Technologies Drilling Method: Direct Push		
Development Method:	PUMP & SURGE Development Date: OCT. 18, 2015		
Bucking Posts/Ballards:	NONE		
Notes:			

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser

MP Elevation (ft):

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation	0	76.49	Slope Away
Ground Surface Elevation	0	76.49	Surface Seal Type: CONCRETE
Riser Pipe (Top)	~0.1' BMP	76.39	Lock Identification: NONE
			Stickup Casing Diameter: 6-INCH
			Backfill/Grout Type: NONE
			Riser Pipe Type: PVC - SCH 40
			Riser Pipe ID: 1-INCH
			Borehole Diameter: 2 7/8-INCH
Top of Well Seal	0.5' BMP	75.99	Type of Seal: BENSEAL
Top of Sand Pack	1.5' BMP	74.99	
Top of Screen	~4.5' BMP	~71.99	Screen Type: SLOTTED PVC
			Screen ID: 1-INCH
			Screen Slot Size: 0.010"
			Screen Length: 10'
			Filter/Sand Pack Type: #1 INDUSTRIAZ QUARTZ
Base of Screen	~14.5' BMP	~61.99	
End Cap	~14.6' BMP	~61.89	Sump: ~0.2'
Drilled Depth	18.2' BMP	58.29	Fallback/Backfill: NATIVE
Bottom of Exploration	18.2' BMP	58.29	(WEATHERED BR
Bedrock Surface	14.8' BMP	61.69	

NOT TO SCALE

MACTEC
511 Congress Street, Portland Maine 04101

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: MW-504

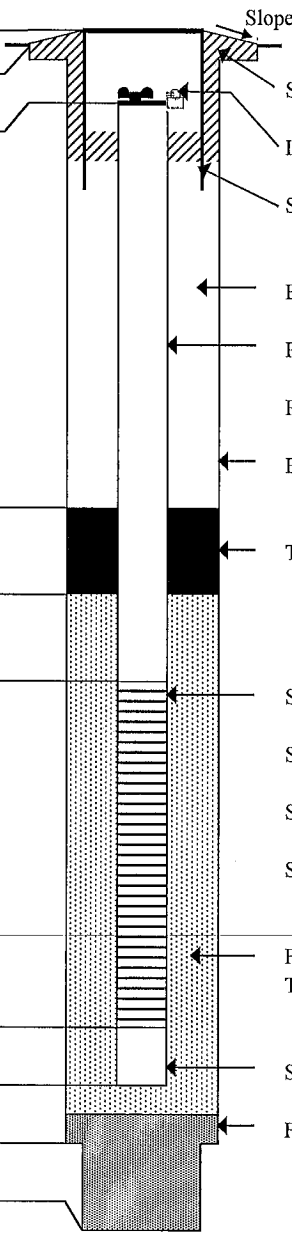
Project Name:	Industrial Overall - Supplemental RI	Date Started:	OCT. 18, 2015 Date Completed: OCT. 18, 2015
Project Location:	New Rochelle, New York	Logged By:	BSH/AW
Project Number:	3612112221 Task Number 06.01	Checked By:	JR Checked Date: 11/3/15
Subcontractor:	Aztech Technologies Drilling Method: Direct Push		no elevation data yet.
Development Method:	Pump & Surge Development Date: OCT. 18, 2015		
Bucking Posts/Ballards:	NONE		
Notes:			

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser

MP Elevation (ft):

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation			
Ground Surface Elevation			
Riser Pipe (Top)	~0.1' BMS		
Top of Well Seal	0.5' BMS		
Top of Sand Pack	1.5' BMS		
Top of Screen	~4.5' BMS		
Base of Screen	~14.5' BMS		
End Cap	~14.6' BMS		
Drilled Depth	18.2' BMS		
Bottom of Exploration	18.2' BMS		
Bedrock Surface	14.8' BMS		



Surface Seal Type: CONCRETE

Lock Identification: NONE

Stickup Casing Diameter: 6-INCH

Backfill/Grout Type: NONE

Riser Pipe Type: PVC - SCH 40

Riser Pipe ID: 1-INCH

Borehole Diameter: 2 7/8-INCH

Type of Seal: BENSEAL

Screen Type: SLOTTED PVC SCH 40

Screen ID: 1-INCH

Screen Slot Size: 0.010"

Screen Length: 10'

Filter/Sand Pack Type: #1 INDUSTRIAL QUARTZ

Sump: ~0.2'

Fallback/Backfill: NATIVE (WEATHERED BR)

NOT TO SCALE

MACTEC

511 Congress Street, Portland Maine 04101

WELL/PIEZOMETER CONSTRUCTION DIAGRAM - FLUSHMOUNT

WELL/PIEZOMETER CONSTRUCTION DIAGRAM
FLUSHMOUNT

LOCATION ID: MW-505

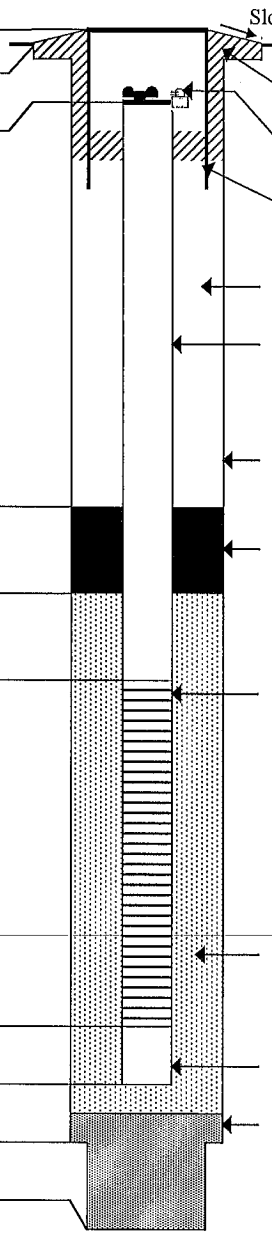
Project Name: Industrial Overall - Supplemental RI
Project Location: New Rochelle, New York
Project Number: 3612112221 Task Number 06.01
Subcontractor: Aztech Technologies Drilling Method: Direct Push
Development Method: OVER PUMP & SURGE Development Date:
Bucking Posts/Ballards: NONE
Notes:

Date Started: OCT. 20, 2015 Date Completed: OCT. 21, 2015
Logged By: B STAW
Checked By: JR Checked Date: 11/3/15
No elevation data yet.

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
MP Elevation (ft):

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation			
Ground Surface Elevation			
Riser Pipe (Top)			
Top of Well Seal	~1.5' Bkg		
Top of Sand Pack	19.0' Bkg		
Top of Screen	21.0' Bkg		
Base of Screen	~26.0' Bkg		
End Cap	~26.3' Bkg		
Drilled Depth	~26.5' Bkg		
Bottom of Exploration	~26.5' Bkg		
(UNWEATHERED) Bedrock Surface	~15.5' Bkg		



Surface Seal Type: STEEL ROAD BOX / CONCRETE
Lock Identification: NONE
Stickup Casing Diameter: 8-INCH
Backfill/Grout Type: NONE
Riser Pipe Type: SCH 40 PVC
Riser Pipe ID: 1-INCH
Borehole Diameter: 4-INCH x 2.5-INCH
Type of Seal: HOLEPLUG (BENTONITE)
Screen Type: SLOTTED PVC
Screen ID: 1-INCH
Screen Slot Size: 0.010"
Screen Length: ~5'
Filter/Sand Pack Type: #1 INDUSTRIAL QUARTZ
Sump: NA
Fallback/Backfill: ~0.1'

NOT TO SCALE

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WELL/PIEZOMETER CONSTRUCTION DIAGRAM - FLUSHMOUNT

WELL DEVELOPMENT RECORD

MACTEC

511 Congress Street, Portland Maine 04101

PROJECT NAME	Industrial Overall - Supplemental RI
PROJECT NUMBER	3612112221
WELL INSTALLATION DATE	10/17/15
WELL DEVELOPMENT DATE	10/19/15

LOCATION ID	MW-501
PAGE	1 OF 1
START TIME	1625
START DATE	10/19/15
END TIME	1649
END DATE	10/19/15

WELL DIAMETER (INCHES): [X] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	2.34 FT	FINAL WELL DEPTH (BMP)	2.35 FT	SCREEN LENGTH	2.34 FT	PROT. CASING STICKUP (AGS)	NA FT
INITIAL DTW (BMP)	1.13 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.01 FT	SCREENED INTERVAL (BMP)	0 TO 2.3	TOC/TOR DIFFERENCE	FT
WATER COLUMN (initial well depth - initial depth to water)	1.21 FT	DTW AFTER DEVELOP. (BMP)	1.13 FT	PUMPING DEPTH (BMP)	2.0 FT	PID AMBIENT AIR	3.6 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.05 GAL	FINAL RECOVERY DEPTH (BMP)	1.13 FT	APPROXIMATE RECHARGE RATE	FT/MIN	PID WELL MOUTH	2.4 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.9 GAL	FINAL RECOVERY TIME (elapsed)	0.01 MIN	FLUIDS LOST DURING DRILLING	NA GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1629	1.13	300	23.42	1.990	6.74	2.95	61.5	162.2	0.25	0.25	
1633	1.13	300	23.50	1.994	6.70	2.01	8.73	160.7	0.25	0.5	
1636	1.13	300	23.53	1.994	6.69	1.75	2.58	111.1	0.25	0.75	
1639	1.13	300	23.54	1.995	6.68	1.75	2.11	105.1	0.25	1.0	
1642	1.13	300	23.54	1.996	6.68	1.76	0.75	150.3	0.25	1.25	
1645	1.13	300	23.55	1.995	6.68	1.75	0.57	142.7	0.25	1.5	
1648	1.13	300	23.54	1.994	6.67	1.72	0.67	117.4	0.25	1.75	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [ ] OTHER

- [X] WATER LEVEL METER
- [X] PID 15839
- [X] WQ METER MO15-07
- [X] TURB. METER MO24-33
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	X	
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	X	
Turbidity < 5NTUs?	X	
10% change in field parameters?		X

WAS DEVELOPMENT CRITERIA MET? Y [X] N [ ]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [Yes] N [ ]

NUMBER OF GALLONS GENERATED: 1.9

NOTES: Redox swinging within a range >10% change all other criteria met

SKETCH

Well Developer Signature: MW

Print Name: Nate Voyer

Checked By:

Date:

WELL DEVELOPMENT RECORD

WELL DEVELOPMENT RECORD

MACTEC

511 Congress Street, Portland Maine 04101

PROJECT NAME: Industrial Overall - Supplemental RI		LOCATION ID: MW ~~65~~ 504	PAGE: 1 OF 3
PROJECT NUMBER: 3612112221		START TIME: 1534	START DATE: 10/18/15
WELL INSTALLATION DATE: 10/18/15	WELL DEVELOPMENT DATE: ~~10/18~~ 10/19 (NW)	END TIME: 1551	END DATE: 10/19/15

WELL DIAMETER (INCHES): [X] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	13.84 FT	FINAL WELL DEPTH (BMP)	14.09 FT	SCREEN LENGTH	10 FT	PROT. CASING STICKUP (AGS)	NA FT
INITIAL DTW (BMP)	1.05 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.25 FT	SCREENED INTERVAL (BMP)	TO	TOC/TOR DIFFERENCE	FT
WATER COLUMN (initial well depth - initial depth to water)	~~13.84~~ 12.79 (NW) FT	DTW AFTER DEVELOP. (BMP)	14.05 FT	PUMPING DEPTH (BMP)	~~13.84~~ ~~12.79~~ (NW) FT	PID AMBIENT AIR	0.0 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	FINAL RECOVERY DEPTH (BMP)	1.27 FT	APPROXIMATE RECHARGE RATE	0.3 FT/MIN	PID WELL MOUTH	0.0 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL.)	7.75 GAL	FINAL RECOVERY TIME (elapsed)	170 MIN	FLUIDS LOST DURING DRILLING	NA GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1537	4.75	250	21.78	2.464	7.59	1.46	>1000	-514.0	0.1	0.1	very silty
1544	12.80	250	21.34	2.539	7.56	5.87	>1000	-398.1	0.5	0.6	
1547	Dry	250	~~21.57~~ (NW)	~~2.397~~ (NW)			(NW) ~~298~~	~~-241.2~~ (NW)			
1630	12.21	250	21.52	2.397	7.58	5.65	298	-241.2	0.5	1.1	
1634	Dry	250					414			1.5	
1717	13.68	250	21.64	2.260	7.60	5.32	>1000	-327.9	0.5	2.0	
1718	Dry									2.1	
1800	13.81	250	21.60	2.226	7.52	5.78	969	-302.5	0.5	2.6	
	Dry										
10/19 0852	7.35	250	21.08	2.214	7.58	3.55	>1000	-428.4	0.25	2.85	
0858	14.08	250	21.54	2.285	7.47	5.63	>1000	-367.5	0.25	3.1	
0941	8.27	250	21.05	2.255	7.61	7.47	>1000	-294.3	0.2	3.3	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [ ] OTHER

- [X] WATER LEVEL METER
- [X] PID 15839
- [X] WQ METER MO15-07
- [X] TURB. METER MO24-33
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	X	
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	X	
Turbidity < 5NTUs?		X
10% change in field parameters?		X

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [Yes] N [ ]

NUMBER OF GALLONS GENERATED: 7.8

NOTES: Low yielding turbid well ; unable to meet <5 NTU + 10% parameters

Well Developer Signature: MF Print Name: Nate Hogan

Checked By: Date:

SKETCH

WELL DEVELOPMENT RECORD

WELL DEVELOPMENT RECORD

MACTEC

511 Congress Street, Portland Maine 04101

PROJECT NAME	Industrial Overall - Supplemental RI	LOCATION ID	MW-504	PAGE	2 OF 3
PROJECT NUMBER	3612112221	START TIME	1534	START DATE	10/18/15
WELL INSTALLATION DATE	10/18/15	END TIME	1551	END DATE	10/19/15
WELL DEVELOPMENT DATE	10/19/15				

WELL DIAMETER (INCHES): [X] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	13.84 FT	FINAL WELL DEPTH (BMP)	14.09 FT	SCREEN LENGTH	10 FT	PROT. CASING STICKUP (AGS)	NA FT
INITIAL DTW (BMP)	1.05 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.25 FT	SCREENED INTERVAL (BMP)	TO	TOC/TOR DIFFERENCE	FT
WATER COLUMN (initial well depth - initial depth to water)	12.74 FT	DTW AFTER DEVELOP. (BMP)	14.05 FT	PUMPING DEPTH (BMP)	13.84 FT	PID AMBIENT AIR	0.0 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	FINAL RECOVERY DEPTH (BMP)	1.27 FT	APPROXIMATE RECHARGE RATE	0.3 FT/MIN	PID WELL MOUTH	0.0 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	7.75 GAL	FINAL RECOVERY TIME (elapsed)	170 MIN	FLUIDS LOST DURING DRILLING	NA GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
0946	13.17	250	21.57	2.314	7.48	6.53	71000	-288.9	0.25	3.55	
1033	9.92	250	21.18	2.253	7.06	5.35	>1000	-295.5	0.25	3.8	
1036	13.72	250	21.56	2.303	7.18	6.58	>1000	-282.0	0.25	4.05	
1120	9.45	250	21.25	2.270	7.29	7.32	>1000	-290.7	0.25	4.3	
1125	13.89	250	21.44	2.283	7.16	6.72	>1000	-278.3	0.25	4.55	
1212	8.87	175	21.32	2.222	7.21	5.01	690	-244.8	0.3	4.85	
1219	12.27	175	21.52	2.265	7.14	4.54	373	-232.4	0.4	5.25	
1309	9.89	150	21.33	2.240	7.20	4.44	323	-236.5	0.25	5.5	
1314	13.42	150	21.66	2.244	7.02	4.64	119	-238.8	0.5	6.0	
1400	8.27	150	21.39	2.234	7.08	5.16	29.1	-190.4	0.25	6.25	
1406	12.17	150	21.71	2.269	7.01	3.27	88.1	-255.3	0.25	6.5	
1455	8.87	150	21.50	2.245	7.04	4.47	20.9	-189.3	0.25	~~6.75~~ (w) 7.0	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [ ] OTHER

- [X] WATER LEVEL METER
- [X] PID 15839
- [X] WQ METER MO15-07
- [X] TURB. METER MO24-33
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	X	
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	X	
Turbidity < 5NTUs?		X
10% change in field parameters?		X

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [Yes] N [ ]

NUMBER OF GALLONS GENERATED: 7.8

SKETCH

NOTES: See Page 1

Well Developer Signature: MH

Print Name: Nate Vogan

Checked By:

Date:

WELL DEVELOPMENT RECORD

MACTEC

511 Congress Street, Portland Maine 04101

PROJECT NAME	Industrial Overall - Supplemental RI	LOCATION ID	MW-504	PAGE	3 OF 3
PROJECT NUMBER	3612112221	START TIME	1534	START DATE	10/18/15
WELL INSTALLATION DATE	10/18/15	END TIME	1551	END DATE	10/19/15
WELL DEVELOPMENT DATE	10/19/15				

WELL DIAMETER (INCHES): [X] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	13.84 FT	FINAL WELL DEPTH (BMP)	14.09 FT	SCREEN LENGTH	10 FT	PROT. CASING STICKUP (AGS)	N.A FT
INITIAL DTW (BMP)	1.05 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.25 FT	SCREENED INTERVAL (BMP)	TO	TOC/TOR DIFFERENCE	FT
WATER COLUMN (initial well depth - initial depth to water)	12.74 FT	DTW AFTER DEVELOP. (BMP)	14.05 FT	PUMPING DEPTH (BMP)	13.84 FT	PID AMBIENT AIR	0.0 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	FINAL RECOVERY DEPTH (BMP)	1.27 FT	APPROXIMATE RECHARGE RATE	0.3 FT/MIN	PID WELL MOUTH	0.0 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	7.75 GAL	FINAL RECOVERY TIME (elapsed)	170 MIN	FLUIDS LOST DURING DRILLING	NA GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
1500	13.11	150	21.74	2.269	7.01	3.52	24.2	-225.2	0.25	~~4.0~~	7.25
1545	8.95	150	21.41	2.252	7.06	4.50	22.1	-170.4	0.25	7.5	
1548	12.50	150	21.67	2.258	7.01	4.14	26.2	-188.8	0.25	7.75	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [ ] OTHER

- [X] WATER LEVEL METER
- [X] PID 15839
- [X] WQ METER MO15-07
- [X] TURB. METER MO24-33
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?	X	
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?	X	
Turbidity < 5NTUs?		X
10% change in field parameters?		X

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [Yes] N [ ]

NUMBER OF GALLONS GENERATED: 7.8

SKETCH

NOTES

See Page 1

Well Developer Signature: MA

Print Name: Nate Vogen

Checked By:

Date:

WELL DEVELOPMENT RECORD

MACTEC

511 Congress Street, Portland Maine 04101

PROJECT NAME	Industrial Overall - Supplemental RI
PROJECT NUMBER	3612112221
WELL INSTALLATION DATE	10/21/15
WELL DEVELOPMENT DATE	10/26/15
LOCATION ID	MW-505
PAGE	1 OF 1
START TIME	0846
START DATE	10/26/15
END TIME	(N) ~~0846~~
END DATE	10/26/15

WELL DIAMETER (INCHES): [X] 1-IN. [ ] 2-IN. [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] OTHER

CASING DIAMETER (INCHES): [ ] 4-IN. [ ] 6-IN. [ ] 8-IN. [ ] 10-IN. [ ] 12-IN. [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

INITIAL WELL DEPTH (BMP)	24.93 FT	FINAL WELL DEPTH (BMP)	24.93 FT	SCREEN LENGTH	10 FT	PROT. CASING STICKUP (AGS)	N.A FT
INITIAL DTW (BMP)	1.19 FT	SEDIMENT REMOVED (final well depth - initial well depth)	0.0 FT	SCREENED INTERVAL (BMP)	14.9 TO 24.9	TOC/TOR DIFFERENCE	FT
WATER COLUMN (initial well depth - initial depth to water)	23.74 FT	DTW AFTER DEVELOP. (BMP)	24.9 FT	PUMPING DEPTH (BMP)	24.9 FT	PID AMBIENT AIR	0.0 PPM
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.97 GAL	FINAL RECOVERY DEPTH (BMP)	10.11 FT	APPROXIMATE RECHARGE RATE	0.1 FT/MIN	PID WELL MOUTH	1.8 PPM
TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	5.0 GAL	FINAL RECOVERY TIME (elapsed)	27 hours ~~MIN~~	FLUIDS LOST DURING DRILLING	NA GAL	END OF WELL DEVELOPMENT SAMPLE TAKEN?	Y [ ] N [X]

FIELD PARAMETERS

TIME	DTW (ft BMP)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	VOLUME PURGED (gal)	TOTAL GALLONS	COMMENTS
0852	18.27	500	19.42	0.280	8.13	2.84	>1000	-291.6	1.0	1.0	
0900	21.50	500	19.19	0.363	7.51	2.61	>1000	-176.8	1.5	1.5	
0906	24.94	500	18.85	0.291	7.24	1.16	>1000	-371.9	2.5	2.5	
1045	20.13	500	19.41	0.669	7.55	7.31	>1000	96.5			
1050	21.83	500	19.52	0.682	7.39	6.70	>1000	104.8		3.5	
1055	23.60	500	19.54	0.529	7.20	6.86	>1000	91.2		3.8	
1240	20.75	500	20.58	1.343	7.18	6.78	271	46.2			
1245	23.71	500	19.79	1.235	7.13	6.90	>1000	75.3		5.1	

EQUIPMENT DOCUMENTATION

- [ ] DEDICATED SUBMERSIBLE
- [ ] SURGE BLOCK
- [ ] BAILER [ ] 2" [ ] ____
- [ ] GRUNDFOS [ ] 2" [ ] 4"
- [ ] OTHER

- [X] WATER LEVEL METER M200-47
- [X] PID 15839
- [X] WQ METER Dois- 07
- [X] TURB. METER MOD4-33
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

WELL DEVELOPMENT CRITERIA

	Y	N
Well water clear to the unaided eye?		X
Sediment thickness remaining in well <1.0% of screen length?	X	
Total water removed = a minimum of 5x calculated well volumes plus 5x drilling fluids lost?		X
Turbidity < 5NTUs?		X
10% change in field parameters?		

WAS DEVELOPMENT CRITERIA MET? Y [ ] N [X]

ADDITIONAL OBSERVATIONS

PURGE WATER CONTAINERIZED: Y [Yes] N [ ]

NUMBER OF GALLONS GENERATED: 5.0

SKETCH

NOTES: Dry at 9.0 (15 well volumes); unable to remove 65 gallons of drilling fluid due to low yield

Well Developer Signature: [signature]

Print Name: Nate Vogan

Checked By:

Date:

WELL DEVELOPMENT RECORD

APPENDIX B.3

WATER SAMPLING FIELD DATA RECORDS

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Industrial Overall - Supplemental RI	LOCATION ID: P2-22 / DATE: 10/18/05
PROJECT NUMBER: 3612112221.06	START TIME: 1312 / END TIME: 1407
SAMPLE ID: 360109-P2-2216 / SAMPLE TIME: 1405	SITE NAME/NUMBER: Industrial Overall/360109 / PAGE: 1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	8.17 FT	FINAL DTW (BMP)	9.05 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	~~NA~~ FT
WELL DEPTH (BMP)	20.77 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	12.6 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.04 GAL	PID WELL MOUTH	0.1 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	2.9 GAL	DRAWDOWN/ TOTAL PURGED	0.04 / 2.9	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
0	8.17	200	19.09	3.066	6.64	7.38	45.6	128.1	16.0	
5	8.99	200	20.25	3.365	6.48	3.26	21.9	119.9	16.0	
10	9.02	200	20.55	3.518	6.46	3.10	9.62	124.2	16.0	
15	9.03	200	20.56	3.571	6.46	2.94	7.23	127.3	16.0	
20	9.03	200	20.69	3.584	6.46	2.79	4.44	127.5	16.0	
25	9.04	200	20.66	3.608	6.45	2.53	2.47	127.9	16.0	
30	9.03	200	20.68	3.614	6.45	2.39	1.47	129.6	16.0	
35	9.04	200	20.86	3.628	6.46	2.21	1.09	128.8	16.0	
40	9.04	200	20.81	3.629	6.46	2.16	1.09	127.0	16.0	
45	9.05	200	20.82	3.625	6.46	2.11	0.80	128.2	16.0	
50	9.05	200	20.67	3.635	6.45	2.13	0.68	127.0	16.0	

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER M20-47
- [X] PID 15839
- [X] WQ METER M015-07
- [X] TURB. METER M024-33
- [X] PUMP S008-41
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260C	N	HCl	40mL	3	N	360109-P2-2216

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	X	
NO-PURGE METHOD UTILIZED		X

NUMBER OF GALLONS GENERATED: 3.0

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

needs new O-Ring for cap (missing)

Sampler Signature: [signature] Print Name: Nate Vogen

Checked By: Date:

MACTEC
511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Industrial Overall - Supplemental RI	LOCATION ID: PZ-33
PROJECT NUMBER: 3612112221.06	DATE: 10/19/15
SAMPLE ID: 360109-PZ-3315	SAMPLE TIME: 1140
	START TIME: 1010
	END TIME: 1141
	SITE NAME/NUMBER: Industrial Overall/360109
	PAGE: 1 OF 2

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	3.07 FT	FINAL DTW (BMP)	11.28 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	17.89 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.1 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	14.82 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.3 GAL	PID WELL MOUTH	0.7 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.6 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	4.7 GAL	DRAWDOWN/ TOTAL PURGED	0.3/4.7	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
0	6.31	200	20.31	2.467	7.21	2.30	4.68	205.3	12.9	
5	7.52	200	20.68	2.554	7.53	0.67	2.27	194.7	12.9	
10	8.52	200	20.68	2.576	7.56	0.58	1.81	194.1	12.9	
15	9.32	200	20.55	2.557	7.57	0.48	1.02	184.5	12.9	
20	9.75	200	20.49	2.541	7.55	0.54	2.19	195.7	12.9	
25	10.09	200	20.43	2.518	7.59	0.47	0.90	192.1	12.9	
30	10.30	200	20.38	2.499	7.61	0.45	0.71	182.7	12.9	
35	10.47	200	20.35	2.466	7.63	0.39	0.45	172.6	14.9	Deep intake close to drawdown
40	10.61	200	20.37	2.468	7.63	0.42	0.39	166.9	14.9	
45	10.74	200	20.39	2.465	7.63	0.44	0.45	162.7	14.9	
50	10.84	200	20.37	2.461	7.63	0.45	0.43	157.0	14.9	
FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])			20	2.43	7.6	0.4	0.24	130	14.9	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [X] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [X] HDPE TUBING [ ] LDPE TUBING [ ] OTHER [ ] OTHER

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [X] WL METER M200-47 [X] PID 15839 [X] WQ METER M015-07 [X] TURB. METER ~~M015-39~~ M024-33 [X] PUMP 5008-41 [ ] OTHER [ ] FILTERS NO. ___ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	N	HCl	40 mL	3	N	360109-PZ-3315

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: [X] YES [ ] NO

NO-PURGE METHOD UTILIZED: [ ] YES [X] NO

NUMBER OF GALLONS GENERATED: 4.8

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Sampler Signature: MV Print Name: Mark Vogan

Checked By: Date:

MACTEC
511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Industrial Overall - Supplemental RI
PROJECT NUMBER	3612112221.06
SAMPLE ID	360109-PZ-3315
SAMPLE TIME	1140
LOCATION ID	PZ-33
DATE	10/19/15
START TIME	1010
END TIME	1141
SITE NAME/NUMBER	Industrial Overall/360109
PAGE	2 OF 2

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	3.07 FT	FINAL DTW (BMP)	11.28 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	17.89 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.1 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	14.82 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.34 GAL	PID WELL MOUTH	0.7 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.6 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	4.73 GAL	DRAWDOWN/ TOTAL PURGED	0.3/4.7	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
55	10.95	200	20.39	2.457	7.63	0.41	0.40	151.6	14.9	
60	11.04	200	20.38	2.451	7.63	0.44	0.41	145.4	14.9	
65	11.09	200	20.37	2.447	7.63	0.44	0.27	141.8	14.9	
70	11.13	200	20.36	2.443	7.63	0.40	0.25	137.4	14.9	
75	11.20	200	20.35	2.437	7.63	0.42	0.24	131.9	14.9	
80	11.21	200	20.35	2.433	7.64	0.40	0.24	128.7	14.9	
85	11.24	200	20.37	2.430	7.64	0.42	0.24	125.5	14.9	
			(W)	(W)	(W)	(W)	(W)	(W)		
			~~20~~	~~2.43~~	~~7.~~	0.4	~~0.24~~	~~130~~		

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	20	2.43	7.6	0.4	0.24	130

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER M200-47
- [X] PID 15839
- [X] WQ METER M015-07
- [X] TURB. METER M024-33
- [X] PUMP 5008-41
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260C	N	HCl	40mL	3	N	360109-PZ-3315

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [X] NO [ ]

NO-PURGE METHOD UTILIZED: YES [ ] NO [X]

NUMBER OF GALLONS GENERATED: 4.8

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: [signature] Print Name: Nak Vogen

Checked By: Date:

MACTEC
511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Industrial Overall - Supplemental RI
PROJECT NUMBER	3612112221.06
SAMPLE ID	360109-P2-34~~09~~ / 34~~09~~D
SAMPLE TIME	1730
LOCATION ID	P2-34
DATE	10/17/15
START TIME	1507
END TIME	1512
SITE NAME/NUMBER	Industrial Overall/360109
PAGE	1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	6.68 FT	FINAL DTW (BMP)	8.42 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	9.25 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	2.57 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.1 GAL	PID WELL MOUTH	0.1 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.11 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.1 GAL	DRAWDOWN/ TOTAL PURGED	0.1 gallons	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
3	8.57	200	24.00	0.960	7.15	~~1.79~~ 20.66	11.1	-124.4	9.25	Purged dry
	Purged	dry,	allow to	recover	then	sample				

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER M300-47
- [X] PID 15839
- [X] WQ METER M015-07
- [X] TURB. METER M024-33
- [X] PUMP 5008-41
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	N	HCl	40 mL	3	FD	360109-P23409
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[X]	[ ]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 0.1

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: [signature] Print Name: Nate Voigt

Checked By: Date:

MACTEC
511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Industrial Overall - Supplemental RI
PROJECT NUMBER	3612112221.06
SAMPLE ID	360109-PZ-3527
SAMPLE TIME	1720
LOCATION ID	PZ-35
DATE	10/17/15
START TIME	1625
END TIME	1720
SITE NAME/NUMBER	Industrial Overall/360109
PAGE	1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	7.34 FT	FINAL DTW (BMP)	9.99 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	31.56 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	24.22 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.11 GAL	PID WELL MOUTH	0.1 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.99 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	4.3 GAL	DRAWDOWN/ TOTAL PURGED	0.11/4.3	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
0	8.98	300	21.21	2.516	7.31	6.77	48.3	-131.7	26.6	
5	9.32	300	20.67	2.539	7.40	1.68	19.1	-133.1	26.6	
10	9.64	300	20.25	2.550	7.41	0.70	12.1	-140	26.6	
15	9.76	300	20.20	2.570	7.45	0.61	4.62	-128.2	26.6	
20	9.82	300	20.11	2.584	7.45	0.61	4.07	-117.9	26.6	
25	9.88	300	20.02	2.594	7.46	0.59	2.79	-110.4	26.6	
30	9.93	300	19.97	2.602	7.46	0.48	2.47	-107.5	26.6	
35	9.95	300	19.92	2.608	7.46	0.48	1.99	-101.5	26.6	
40	9.96	300	19.89	2.607	7.46	0.38	2.02	-97.7	26.6	
45	9.97	300	19.85	2.605	7.46	0.38	1.44	-94.4	26.6	
50	9.99	300	19.84	2.600	7.46	0.40	1.41	-93.8	26.6	
FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])			20	2.60	7.5	0.4	1.41	-94		TEMP.: nearest degree (ex. 10.1 = 10) COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696) pH: nearest tenth (ex. 5.53 = 5.5) DO: nearest tenth (ex. 3.51 = 3.5) TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101) ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] BLADDER [ ] WATTERA [ ] OTHER [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX [X] DEIONIZED WATER [ ] POTABLE WATER [ ] NITRIC ACID [ ] HEXANE [ ] METHANOL [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS: [X] SILICON TUBING [ ] TEFLON TUBING [ ] TEFLON LINED TUBING [X] HDPE TUBING [ ] LDPE TUBING [ ] OTHER [ ] OTHER

[ ] S. STEEL PUMP MATERIAL [ ] PVC PUMP MATERIAL [ ] GEOPROBE SCREEN [ ] TEFLON BLADDER [ ] OTHER [ ] OTHER [ ] OTHER

EQUIPMENT USED: [X] WL METER M000-47 [X] PID 15859 [X] WQ METER M015-07 [X] TURB. METER M024-33 [X] PUMP 5008-41 [ ] OTHER [ ] FILTERS NO. TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	N	HCl	120 mL	Y	N	360109-PZ3527

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES [X] NO [ ]

NO-PURGE METHOD UTILIZED: YES [ ] NO [X]

NUMBER OF GALLONS GENERATED: _____

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Sampler Signature: MV Print Name: Nate Vagen

Checked By: Date:

MACTEC

511 Congress Street, Portland Maine 04101

LOW FLOW GROUNDWATER SAMPLING RECORD

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Industrial Overall - Supplemental RI	LOCATION ID: MW-501
PROJECT NUMBER: 3612112221.06	DATE: 10/27/15
SAMPLE ID: 360109-MW-501 02 (MS/MD)	SAMPLE TIME: 1840
	START TIME: 1756
	END TIME: 1840
	SITE NAME/NUMBER: Industrial Overall/360109
	PAGE: 1 OF 1

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	1.61 FT	FINAL DTW (BMP)	1.61 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	2.34 FT	SCREEN LENGTH	2.34 FT	PID AMBIENT AIR	0.2 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	0.73 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.0004 GAL	PID WELL MOUTH	0.3 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.03 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	2.3 GAL	DRAWDOWN/ TOTAL PURGED	0.0004 / 2.3	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
5	1.63	200	23.40	2.564	7.19	2.57	12.5	129.3		
10	1.62	200	23.41	2.557	6.91	2.14	2.42	132.1		
15	1.62	200	23.39	2.555	6.75	2.03	0.73	130.7		
20	1.62	200	23.36	2.559	6.69	1.69	0.42	130.8		
25	1.62	200	23.34	2.566	6.64	1.35	0.49	130.2		
30	1.62	200	23.31	2.579	6.61	1.19	0.37	130.2		
35	1.62	200	23.30	2.584	6.60	1.14	0.47	132.5		
38	1.62	200	23.30	2.586	6.59	1.12	0.23	133.3		
41	1.62	200	23.30	2.586	6.59	1.10	0.24	133.1		

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	23	2.59	6.6	1.1	0.2	130

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER
- [X] PID
- [X] WQ METER
- [X] TURB. METER
- [X] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	(MS/MD) VOC	8260C	N	HCl	3x40mL		MS/MSD	see above

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[X]	[ ]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 2.3

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Sampler Signature: MW Print Name: Nate Vogen

Checked By: Date:

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Industrial Overall - Supplemental RI		SS-301	10/22/15
PROJECT NUMBER		START TIME	END TIME
3612112221.06.01		1410	1430
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
360109-GW-3010~~15~~14 (M)	1430	Industriall Overall / 360109	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP		X	
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	11.51 FT	FINAL DTW (BMP)	14.89 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	14.89 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	3.38 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.14 GAL	PID WELL MOUTH	2.6 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.14 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.25 GAL	DRAWDOWN/ TOTAL PURGED	NA	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
1413	12.01	150	19.49	1.178	6.63	3.34	840	-123.0	13.9	
1419	14.27	150	18.71	0.595	6.64	4.11	>1000	-141.9	14.7	
Dry at		1421								

SAMPLE OBSERVATIONS: CLEAR COLORED _____ CLOUDY _____ TURBID ~800 ODOR _____ OTHER (see notes) _____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[X] WATER LEVEL METER 1200-47
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID 15839
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[X] WQ METER MOIS-07
[ ] _____	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[X] TURB. METER MO24-33
[ ] WATTERA	[ ] HEXANE	[X] LDPE TUBING	[ ] OTHER _____	[X] PUMP 5008-41
[ ] OTHER _____	[ ] METHANOL	[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER
[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER _____	[ ] FILTERS NO. ____ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	HCl / 4 C	3 X 40 Ml	34	N	see above
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							

NOTES

Sample intake at 13.9 ft bgs
allow

SKETCH

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	X		NUMBER OF GALLONS GENERATED: 0.25
NO-PURGE METHOD UTILIZED		X	If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

Sampler Signature: MV Print Name: Nate Wyman

Checked By: Date:

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

...c1\Contract D007619\Projects\Industrial Overall Sen... ...4.0_Deliv... ...emental RI FAP\Attachment 2 - FDRs\Geoprobe GW

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Industrial Overall - Supplemental RI		SS-408	10/22/15
PROJECT NUMBER		**START TIME**	**END TIME**
3612112221.06.01		1356	1515
SAMPLE ID	**SAMPLE TIME**	**SITE NAME/NUMBER**	**PAGE**
360109-GW-40815	1515	Industriall Overall / 360109	1 OF 1

SAMPLE TYPE [X] GRAB [ ] WELL/PIEZOMETER [ ] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER _____

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER _____

TUBING ID (INCHES) [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER _____

MEASUREMENT POINT (MP) [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER _____

WELL INTEGRITY	YES	NO	N/A
CAP		X	
CASING	X		
LOCKED		X	
COLLAR		X	

INITIAL DTW (BMP)	14.44 FT	FINAL DTW (BMP)	14.86 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	NA FT
WELL DEPTH (BMP)	14.86 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0-0 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	0.42 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.02 GAL	PID WELL MOUTH	0-0 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.02 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.1 GAL	DRAWDOWN/ TOTAL PURGED	NA	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1356	BEGIN PURGING									
Not	enough	water	in	well	for	water	quality	→	purged	dry after 125 mL

SAMPLE OBSERVATIONS: CLEAR COLORED _____ CLOUDY _____ TURBID _____ ODOR _____ OTHER (see notes) _____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	DECON FLUIDS USED	TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED
[X] PERISTALTIC	[X] LIQUINOX	[X] SILICON TUBING	[ ] S. STEEL PUMP MATERIAL	[X] WATER LEVEL METER MJOO-47
[ ] SUBMERSIBLE	[X] DEIONIZED WATER	[ ] TEFLON TUBING	[ ] PVC PUMP MATERIAL	[X] PID 15839
[ ] BLADDER	[ ] POTABLE WATER	[ ] TEFLON LINED TUBING	[ ] GEOPROBE SCREEN	[X] WQ METER MOIS-07
_____	[ ] NITRIC ACID	[ ] HDPE TUBING	[ ] TEFLON BLADDER	[X] TURB. METER MOJ4-33
[ ] WATTERA	[ ] HEXANE	[X] LDPE TUBING	[ ] OTHER _____	[X] PUMP 5008-41
[ ] OTHER _____	[ ] METHANOL	[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER
[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER _____	[ ] OTHER _____	[ ] FILTERS NO. ___ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	HCl / 4 C	3 X 40 Ml			see above
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							

NOTES

allow to recover; only able to pull 42 mL after 1.25 hours; Submit single VOA

SKETCH

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[X]	[ ]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 0.1

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

Sampler Signature: [signature] Print Name: Nate Vogan

Checked By: Date:

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: Industrial Overall - Supplemental RI	SAMPLE LOCATION: MW-504
PROJECT NUMBER: 3612112221.06.01	DATE: 10/27/15
SAMPLE ID: 360109-MW-504-10	START TIME: 0830
SAMPLE TIME: 1620	END TIME: 1622
SITE NAME/NUMBER: Industriall Overall / 360109	PAGE: 1 OF 1

SAMPLE TYPE: [X] GRAB [X] WELL PIEZOMETER [ ] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER

WELL DIAMETER (INCHES): [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES): [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	1.65 FT	FINAL DTW (BMP)	8.18 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	14.09 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.9 PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	12.44 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.3 GAL	PID WELL MOUTH	3.4 PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.5 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.5 GAL	DRAWDOWN/ TOTAL PURGED	0.3/0.5	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
0832	5.72	250	21.21	2.488	7.55	2.75	49.0	-397.2		
0835	10.17	250	21.54	2.510	7.43	1.38	52.2	-405.6		
0837	14.17	250	21.72	2.507	7.40	2.45	156	-340.2		Purged dry
1627	8.12	250	21.69	2.442	7.38	2.46	9.98	-167.1	10	Post sample

SAMPLE OBSERVATIONS: CLEAR X COLORED ____ CLOUDY ____ TURBID ____ ODOR ____ OTHER (see notes) ____

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC; [ ] SUBMERSIBLE; [ ] BLADDER; [ ] WATTERA; [ ] OTHER; [ ] OTHER

DECON FLUIDS USED: [X] LIQUINOX; [X] DEIONIZED WATER; [ ] POTABLE WATER; [ ] NITRIC ACID; [ ] HEXANE; [ ] METHANOL; [ ] OTHER

TUBING PUMP BLADDER MATERIALS: [X] SILICON TUBING; [ ] TEFLON TUBING; [ ] TEFLON LINED TUBING; [ ] HDPE TUBING; [ ] LDPE TUBING; [ ] OTHER; [ ] OTHER

[ ] S. STEEL PUMP MATERIAL; [ ] PVC PUMP MATERIAL; [ ] GEOPROBE SCREEN; [ ] TEFLON BLADDER; [ ] OTHER; [ ] OTHER; [ ] OTHER

EQUIPMENT USED: [X] WATER LEVEL METER M200-47; [X] PID 15859; [X] WQ METER MO15-07; [X] TURB. METER MU24-33; [X] PUMP 5008-41; [ ] OTHER; [ ] FILTERS NO. ____ TYPE ____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC 8260C	8260C	HCl	3x40mL	Y	N	See above

NOTES:
- recovered to 1.71 ft btoc by 1620
- purge tubing + sample ; take post sample water quality measurement

SKETCH

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	X		NUMBER OF GALLONS GENERATED: 0.5
NO-PURGE METHOD UTILIZED		X	If yes, purged approximately 1 standing volume prior to sampling or ____ mL for this sample location.

Sampler Signature: [signature] Print Name: Nate Vogan

Checked By: Date:

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME		SAMPLE LOCATION	DATE
Industrial Overall - Supplemental RI		MW-505	10/27/15
PROJECT NUMBER		START TIME	END TIME
3612112221.06.01		1512	1521
SAMPLE ID	SAMPLE TIME	SITE NAME/NUMBER	PAGE
360109-MW-505-22	1515	Industriall Overall : 360109	1 OF 1

SAMPLE TYPE [X] GRAB [X] WELL/PIEZOMETER [ ] GEOPROBE [ ] PORE WATER [ ] OUTFALL [ ] OTHER _____

WELL DIAMETER (INCHES) [X] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER _____

TUBING ID (INCHES) [X] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER _____

MEASUREMENT POINT (MP) [X] TOP OF RISER (TOR) [ ] TOP OF CASING (TOC) [ ] OTHER _____

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED		X	
COLLAR	X		

INITIAL DTW (BMP)	10.11 FT	FINAL DTW (BMP)	17.11 FT	PROT. CASING STICKUP (AGS)	NA FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	24.93 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	N.A SEC
WATER COLUMN	14.82 FT	DRAWDOWN VOLUME (initial DTW- final DTW X well diam. squared X 0.041)	0.3 0.6 (MW) GAL	PID WELL MOUTH	2.3 PPM	DISCHARGE TIMER SETTING	N.A SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	0.6 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	0.6 GAL	DRAWDOWN/ TOTAL PURGED	0.3/0.6	PRESSURE TO PUMP	N.A PSI

FIELD PARAMETERS

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C)	SP. CONDUCTANCE (mS/cm)	pH (units)	DISS. O_2 (mg/L)	TURBIDITY (ntu)	REDOX (mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
	BEGIN PURGING									
1518	14.02	250	19.19	1.750	7.69	5.90	17.5	154.2	21.93	

SAMPLE OBSERVATIONS: CLEAR [X] COLORED [ ] CLOUDY [ ] TURBID [ ] ODOR [ ] OTHER (see notes) [ ]

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER _____
- [ ] WATTERA
- [ ] OTHER _____
- [ ] OTHER _____

DECON FLUIDS USED
- [X] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER _____

TUBING PUMP BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER _____
- [ ] OTHER _____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] OTHER _____

EQUIPMENT USED
- [X] WATER LEVEL METER M200-47
- [X] PID 15839
- [X] WQ METER MU15-07
- [X] TURB. METER MU24-33
- [X] PUMP 5008-41
- [ ] OTHER _____
- [ ] FILTERS NO. ____ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X]	VOC	8260C	HCl	3x40mL	Y	N	see above
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							
[ ]							

NOTES

Well developed on 10/26/15
- purged dry for 5 well volumes
- take sample after purging tubing + take post sample water quality

SKETCH

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[X]	[ ]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 0.6 ~~0.25~~ (MW)

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

Sampler Signature: [signature] Print Name: Nate Vogen

Checked By: Date:

GROUNDWATER/ PORE WATER GRAB SAMPLING RECORD

APPENDIX B.4

SOIL VAPOR GRAB SAMPLING FIELD DATA RECORDS

Soil Vapor and Air Field Data Record

					Ambient Air		Soil Vapor					
Location(1)	Type (2)	Depth (feet)	Excavation Method (3)	Sampling Method (4)	O_2 (% vol)	CO_2 (% vol)	O_2 (% vol)	CO_2 (% vol)	PID (ppbv)	Date/Time	Sample ID	Comment
RP-01	SA	9.2	NA	PRT						10-26-15 1400	SA-RP01-09	Manhole at intersection of Relyea and Bartels Place
BP-01	SA	8.4	NA	PRT						10-26-15 1417	SA-BP01-08	Bartels Place manhole (MH-01) in front of Bulfamante
PS-01	SA	9.8	NA	PRT						10-26-15 1435	SA-PS01-10	Pine Street manhole (MH-03) immediately adjacent to Pearlgreen Parking lot
PS-02	SA	10.6	NA	PRT						10-26-15 1445	SA-PS02-11	Pine Street manhole (MH-04) at turn of the sewer line
PS-03	SA	7.6	NA	PRT						10-26-15 1500	SA-PS03-08	Upgradient background sample at manhole outside 35 Pine Street
PS-04	SA	10.0	NA	PRT						10-26-15 1507	SA-PS04-10	Pine Street manhole (MH-05) in front of 21 Pine St
PS-05	SA	11.6	NA	PRT						10-26-15 1515	SA-PS05-12	Pine Street manhole (MH-06) in front of 12 Pine St
BP-02	SVG	3.0	GP	PPS	20.9	0.6	20.9	0.4	1268	10-26-15 1537	SVG-BP02-03	HS-508 Sample location adjacent to IO building post sample (20.9 / 0.2 / 657 ppbv)
BP-03	SVG	3.0	GP	PPS	20.9	0.6	20.9	0.4	673	10-26-15 1600	SVG-BP03-03	HS-507 Sample location adjacent to IO building post sample (20.9 / 0.4 / 828 ppbv)
BP-04	SVG	3.0	GP	PPS	20.9	0.4	20.9	0.4	1E+05	10-26-15 1610	SVG-BP04-03	HS-506 Sample location adjacent to IO building post sample (20.9 / 0.2 / 113 ppmv)
BP-05	SVG	3.0	HD, SV	PPS	20.9	0.4	20.9	0.4	615	10-27-15 1018	SVG-BP05-03	Eastern most point on sewer line (8.8 ft west of connection to main line); post sample (19.1 / 1.6 / 799)

Notes:
ppm- parts per million
ppbv-parts per billion per volume
PID- photo ionization detector
ug/m^3 - micrograms per cubic meter
PCE - Tetrachloroethene
TCE - Trichloroethene

(1) Sample Location
BP- Bartels Place
PS -Pine Street
MR- MetroNorth Property
ST#- Structure 1 or 10

(2) Sample Type
SVG- Soil Vapor Grab
SA- Sewer Line Air
IAS- Indoor Air Screening
AA- Ambient Air

(3) Excavation Method
SV- Shop Vac
AK- Air

(4) Sampling Method
PPS- push point sampler
PRT- post run tubing
HSS- Hapsite Screening

Sampled By: Nate Vogan_____Reviewed By: _Jean Firth_____

Soil Vapor and Air Field Data Record

					Ambient Air		Soil Vapor					
Location(1)	**Type (2)**	**Depth (feet)**	**Excavation Method (3)**	**Sampling Method (4)**	**O_2 (% vol)**	**CO_2 (% vol)**	**O_2 (% vol)**	**CO_2 (% vol)**	**PID (ppbv)**	**Date/Time**	**Sample ID**	**Comment**
BP-06	SVG	3.0	HD, SV	PPS	20.9	0.4	8.2	4.4	3158	10-27-15 1048	SVG-BP06-03	42.4 ft west of building tie in, associated with potential lateral (PL-02); post sample (6.6 / 9.2 / 3771)
BP-07	SVG	3.0	HD, SV	PPS	20.9	0.2	20.6	0.6	3535	10-27-15 1105	SVG-BP07-03	60.9 ft west of building tie in, associated with potential lateral (PL-03); post sample (20.9 / 0.6 / 2382)
BP-08	SVG	3.0	HD, SV	PPS	20.9	0.2	10.4	2.4	1365	10-27-15 1117	SVG-BP08-03	108.1 ft west of building tie in, potential lateral (PL-05) to 25 Bartels Place; post sample (0.7 / 3.4 / 1488)
BP-09	SVG	3.0	HD, SV	PPS	20.9	0.2	5.4	1.8	1924	10-27-15 1127	SVG-BP09-03	111.2 ft west of building tie in, potential lateral (PL-05) to 16 Bartels Place; post sample (8.4 / 1.6 / 2042)
BP-10	SVG	3.0	HD, SV	PPS	20.9	0	12.2	1.8	990	10-27-15 1145	SVG-BP10-03	155.7 ft west of building tie in (MH-01), NE side; post sample (9.5 / 2.2 / 3005)
BP-11	SVG	3.0	HD, SV	PPS	20.9	0	5.1	4.6	2114	10-27-15 1157	SVG-BP11-03	155.7 ft west of building tie in (MH-01), NW side; post sample (11.6 / 2.6 / 2743)
BP-12	SVG	3.0	HD, SV	PPS	20.9	0	6.5	3	3098	10-27-15 1210	SVG-BP12-03	155.7 ft west of building tie in (MH-01), SW side; post sample (5.7 / 3.0 / 1069)
BP-13	SVG	4.0	HD, SV	PPS	20.9	0	17.4	0.3	2488	10-27-15 1228	SVG-BP13-04	188.7 ft west of building tie in, in front of 29 Bartels Place; post sample (11.8 / 1.6 / 3730)
BP-14	SVG	2.5	HD, SV	PPS	20.9	0.2	20.9	0.2	3052	10-27-15 1404	SVG-BP14-03	218.7 ft west of building tie in, in front of 31 Bartels place; post sample (19.8 / 0.0 / 2484)
BP-15	SA	2.0	HD, SV	PRT	20.9	0	20.9	0.2	2689	10-27-15 1423	SA-BP15-03	Storm sewer at corner of Clear Channel Outdoor and the MNR property; post (20.9 / 0.0 / 2109)
BP-16	SVG	2.5	HD, SV	PPS	20.9	0.2	17.1	2	2058	10-27-15 1533	SVG-BP16-03	Sample 7 ft east of BP-07, IO side of sewer line; post sample (16.7 / 2.2 / 2384)

Notes:
ppm- parts per million
ppbv-parts per billion per volume
PID- photo ionization detector
ug/m^3 - micrograms per cubic meter
PCE - Tetrachloroethene
TCE - Trichloroethene

(1) Sample Location
BP- Bartels Place
PS -Pine Street
MR- MetroNorth Property
ST#- Structure 1 or 10

(2) Sample Type
SVG- Soil Vapor Grab
SA- Sewer Line Air
IAS- Indoor Air Screening
AA- Ambient Air

(3) Excavation Method SV- Shop Vac
AK- Air Knife
HA- Hand

(4) Sampling Method
PPS- push point sampler
PRT- post run tubing
HSS- Hapsite Screening

Sampled By: Nate Vogan_____Reviewed By: _Jean Firth_____

Soil Vapor and Air Field Data Record

					Ambient Air		Soil Vapor					
Location(1)	**Type (2)**	**Depth (feet)**	**Excavation Method (3)**	**Sampling Method (4)**	**O_2 (% vol)**	**CO_2 (% vol)**	**O_2 (% vol)**	**CO_2 (% vol)**	**PID (ppbv)**	**Date/Time**	**Sample ID**	**Comment**
BP-17	SVG	3.0	HD, SV	PPS	20.9	0.2	12.4	3	1267	10-27-15 1548	SVG-BP17-03	16 ft west of BP-07 between 21 and 23 Bartles Place; post sample 99.5 / 3.6 / 1280)
BP-18	SVG	3.0	HD, SV	PPS	20.9	0.4	1.7	2.6	11300	10-27-15 1706	SVG-BP18-03	7 ft west of BP-07; post sample (0.4 / 8.4 / 6640)
PS-06	SVG	5.8	HD, SV	PPS	20.9	0	20	1.6	7045	10-28-15 1130	SVG-PS06-06	Adjacent to brick wall for Pearlgreen; Post sample (20.0 / 1.4 / 6944)
PS-07	SVG	5.8	HD, SV	PPS	20.9	0	20.9	0	6247	10-28-15 1153	SVG-PS07-06	4 ft south of manhole MH-04; post sample (20.9 / 0.0 / 7053)
PS-08	SA	6.2	NA	PRT	20.9	0	20.9	0	7910	10-28-15 1220	SA-PS08-06	Catch basin sample from storm sewer in front of Pearlgreen; post sample (20.9 / 0.0 / 7910)
PS-09	SVG	2.9	HD, SV	PPS	20.9	0	NA	NA	8071	10-28-15 1229	SVG-PS09-03	53.4 ft south of MH-04; associated with potential lateral PL-01; post sample (16.7 / 3.6 / 2939)
PS-10	SVG	2.9	HD, SV	PPS	20.9	0	11.5	2.4	5837	10-28-15 1250	SVG-PS10-03	129.4 ft south of MH-04, associated with potential pipe break (PB-02); post sample (11.3 / 3.2 / 5772)
PS-11	SVG	1.5	HD, SV	PPS	20.9	0.2	20.8	0.4	7400	10-28-15 1305	SVG-PS11-02	172.1 ft south of MH-04, located just north of manhole MH-05; post sample unavailable due to water in tubing
PS-12	SVG	1.0	HD, SV	PPS	20.9	0.2	16.6	2.2	5042	10-28-15 1340	SVG-PS12-01	209.2 ft south of MH-04; shallow sample point due to hammer drill failure; post sample (17.5 / 2.8 / 5230)
PS-13	SVG	1.0	HD, SV	PPS	20.9	0.2	20.9	0.4	600	10-28-15 1405	SVG-PS13-01	264.7 ft south of MH-04; adjacent to MH-06; post sample (16.4 /2.8 / 700)
PS-14	SVG	1.3	HD, SV	PPS	20.9	0.2	18.6	0.6	500	10-28-15 1415	SVG-PS14-01	313.5 ft south of MH-04; shallow sample point due to hammer drill failure; post sample (20.9 / 0.0 / 500))

Notes:
ppm- parts per million
ppbv-parts per billion per volume
PID- photo ionization detector
ug/m^3 - micrograms per cubic meter
PCE - Tetrachloroethene
TCE - Trichloroethene

(1) Sample Location
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PS -Pine Street
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(2) Sample Type
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IAS- Indoor Air Screening
AA- Ambient Air

(3) Excavation Method SV- Shop Vac
AK- Air Knife
HA- Hand

(4) Sampling Method
PPS- push point sampler
PRT- post run tubing
HSS- Hapsite Screening

Sampled By: Nate Vogan_____Reviewed By: _Jean Firth_____

APPENDIX C

MANIFESTS FOR OFF-SITE TRANSPORT AND DISPOSAL OF WASTE MATERIALS

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NYR000208967
2. Page 1 of: 1
3. Emergency Response Phone: (908) 354-0210
4. Manifest Tracking Number: 014168256 JJK

GENERATOR

5. Generator's Name and Mailing Address: INDUSTRIAL OVERALL UNIFORM CO
10 BARTELS PLACE
NEW ROCHELLE, NY 10801
Generator's Phone: (508) 402-9564
Generator's Site Address (if different than mailing address):

6. Transporter 1 Company Name: CLEAN VENTURE INC.
U.S. EPA ID Number: NJ0000027193

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Cycle Chem Inc.
217 South First Street
Elizabeth, NJ 07206
Facility's Phone: (908) 355-5800
U.S. EPA ID Number: NJD002200046

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
RQ	1. NA3077 HAZARDOUS WASTE, SOLID, N.O.S. (F001 F002) 9 PG III (RQ F001 10# F002 10#) ERG# 171	2	DM	600	P	F001	F002	B
RQ	2. NA3082 HAZARDOUS WASTE, LIQUID, N.O.S. (F001 F002) 9 PG III (RQ F001 10# F002 10#) ERG# 171	1	DM	30	G	F001	F002	T
	3.							
	4.							

14. Special Handling Instructions and Additional Information: LDR On File 963283/956268/182107/326917 (1)R02-1 SOIL BORINGS, DRILLING SOILS (2)ID-½ PURGE, DECON WATER

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Nate Vajan
Signature:
Month: 10 Day: 29 Year: 15

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Luther Merritt
Signature:
Month: 10 Day: 29 Year: 15
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
(3-2) ADD D007, D008, D009
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141		

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Helen Ellis
Signature:
Month: 11 Day: 4 Year: 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

CleanVenture/CycleChem

CVCC 1708[illegible]6

NON-HAZARDOUS SOLID WASTE

The Environmental Services Source

BILL OF LADING

Page 1 of 1 — 24 Hour Emergency Number [illegible]

Generator's Name and Mailing Address: INDUSTRIAL OVERALL UNIFORM CORP.
10 BARTELS PLACE
NEW ROCHELLE, NY 1080[illegible]

Generator's Phone: (508) 40[illegible]-8564

Transporter 1 Company Name: CLEAN VENTURE INC.

Transporter 2 Company Name:

Designated Facility Name and Site Address: Cycle Chem Inc.
217 South First Street
Elizabeth, NJ 07206

10. US EPA ID Number: NJD [illegible]

BOL

State Trans. ID-NJDEPE [illegible]
Decal No.-
Transporter's Phone (905) 355-5800
State Trans. ID-NJDEPE
Decal No.-
Transporter's Phone ( )
Facility's Phone ((908)) 355-5800

	US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	Containers No.	Containers Type	Total Quantity	Unit Wt/Vol	Waste No.
a.	Non-DOT CHEMICAL PROCESS SOLID Non-RCRA	1[illegible]	DM	800	P	[illegible]
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

a.

b.

c.

d.

CC Generator # and Product Codes: [illegible] 1[illegible]2107/326817 [illegible] EMPTY [illegible] DRUMS

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and are non-hazardous by USEPA & applicable state regulations.

PLACARDS REQUIRED

PLACARDS SUPPLIED ☐ YES ☐ NO FURNISHED BY CARRIER

Printed/Typed Name: [illegible] | Signature: [illegible] | Month Day Year: 10 09 1[illegible]

TRANSPORTER

Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: [illegible] | Signature: [illegible] | Month Day Year: 10 [illegible] 1[illegible]

Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Month Day Year:

FACILITY

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest.

Printed/Typed Name: Helen El[illegible] | Signature: [illegible] | Month Day Year: 10/09/15

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

COPY 1 - WHITE - GENERATOR   COPY 2 - PINK - TRANSPORTER   COPY 3 - BLUE - CycleChem   COPY 4 - CANARY - FACILITY

APPENDIX D

SITE SURVEY DATA

SAMPLE LOCATIONS 2-3-14					
Pnt.	Northing	Easting	Ground Elev.	PVC RISER PIPE ELEV.	Desc.
2001	756635.4	689284.1	77.71	-	A3
2014	756641.5	689308.5	78.64	-	B3
2017	756645.1	689319.2	80.05	-	SS 23
2018	756658.1	689306.9	78.40	-	B2
2025	756666.6	689324.1	78.42	-	C1
2026	756658.6	689326.3	81.06	-	C2A
2027	756652.7	689320.8	80.86	-	C2
2028	756654.1	689329.7	80.15	-	SS 212
2035	756676.1	689339.3	81.69	-	D1
2041	756681.6	689348.3	81.14	-	SS 211
2042	756692.0	689351.6	84.67	-	SS 208
2049	756699.5	689370.9	86.68	-	SS 210
2059	756682.1	689358.2	80.14	-	SS 216
2060	756672.3	689352.7	79.59	-	SS 215
2062	756661.2	689342.9	79.72	-	SS 214
2063	756682.5	689404.7	81.83	-	G1
2064	756679.4	689421.4	82.11	-	H1
2065	756685.4	689390.2	81.49	-	F1
2066	756659.0	689403.2	80.01	-	G2
2067	756662.1	689387.8	79.96	-	F2
2068	756669.2	689370.8	79.79	-	E2
2069	756644.5	689387.5	79.05	-	F3
2070	756664.0	689351.9	79.08	-	D2
2071	756632.5	689372.5	78.14	-	GS7
2072	756638.7	689364.5	77.70	-	E3
2073	756645.6	689349.0	77.60	-	D3
2074	756619.7	689357.9	76.92	-	GS25
2075	756625.0	689348.8	76.39	-	D4
2076	756610.3	689347.5	76.14	-	GS8
2077	756639.1	689330.2	76.81	-	C3
2078	756629.8	689317.6	76.23	-	C3A
2079	756596.3	689337.0	75.67	-	C5
2080	756602.6	689344.5	75.98	-	D5
2081	756592.4	689358.4	76.70	-	E5
2082	756584.7	689359.1	76.59	-	PZ-22
2083	756601.5	689350.8	76.50	-	PZ-19
2084	756583.4	689347.0	75.76	-	D6
2087	756555.1	689362.3	76.25	76.12	MW-24
2088	756551.9	689362.1	76.14	75.83	MW-24B
2089	756545.6	689365.3	76.29	-	E8
2090	756544.4	689346.3	74.95	-	D8
2091	756562.0	689347.6	75.42	-	D7
2092	756577.8	689325.4	75.08	-	C6
2093	756560.4	689328.6	74.78	-	C7
2094	756545.7	689331.5	74.55	-	C8
2095	756518.5	689334.5	74.34	-	C9
2096	756521.7	689347.4	74.97	-	D9
2097	756525.0	689359.7	75.64	-	E9
2098	756526.0	689369.6	76.41	-	PZ-21
2101	756614.4	689333.0	75.83	-	C4
1140	756608.5	689508.1	88.50	-	MW-21
2099	756654.2	689380.3	79.30	-	MW-25B
2100	756648.1	689385.2	79.15	-	MW-25
2300	756634.2	689586.4	91.46	91.22	MW-27B
2303	756584.0	689330.8	75.24	74.66	MW-30B
2309	756648.0	689310.3	78.52	78.03	MW-29B
2311	756646.5	689298.3	77.86	-	GS-30
2312	756659.9	689308.7	78.30	-	GS-31
	756673.2	689320.5	UNK	-	GS-32
2314	756666.1	689351.0	79.25	-	SLUDGE AREA 2
2315	756673.6	689363.3	79.72	-	SLUDGE AREA 1
	756606.1	689328.4	UNK	-	SLUDGE 3 CONF
2318	756574.3	689289.1	74.21	-	MPIP
2320	756560.6	689292.0	72.60		MPIP
2317	756687.2	689235.3	78.30	-	PZ-29
2321	756580.3	689289.3	72.66	-	CB-02**

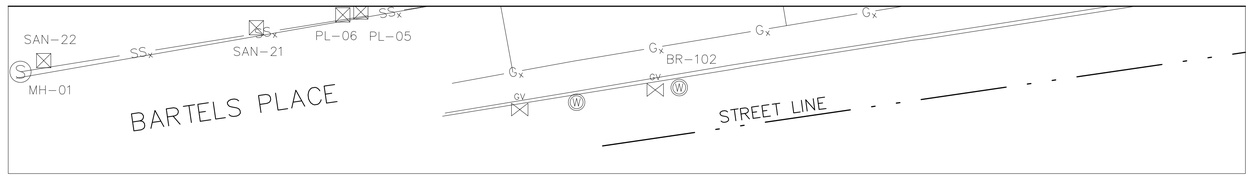
Horizontal Coordinates reference to the New York State Plane Coordinate System, East Zone (3101) based on NAD 83 (2011). Vertical Datum is NAVD88. Horizontal and Vertical control was established by NYSNET RTK.

**The well is Cinder Block lined, Sump = 66.76'.

Sample Locations 10-26-15					
Pnt.	Northing	Easting	Ground Elev.	PVC Riser Pipe Elev.	Desc.
3202	756514.49	689400.36	78.96	-	HS-506/BP-03
3205	756515.86	689407.23	79.63	-	HS-507/BP-02
3206	756516.83	689406.98	79.59	-	HS-508/BP-01
3207	756515.63	689404.11	79.28	-	SAN-16
3208	756507.66	689404.46	79.24	-	SAN-17
3209	756495.35	689403.60	79.33	-	SAN-18
3210	756491.39	689399.74	78.98	-	SAN-19
3211	756490.37	689386.39	77.85	-	
3212	756487.80	689367.62	76.20	-	
3213	756486.72	689360.89	75.59	-	PL-02
3214	756484.57	689346.28	74.30	-	PL-03
3215	756481.87	689331.93	73.17	-	
3216	756479.23	689315.72	71.81	-	PL-04
3217	756476.78	689299.54	70.48	-	PL-05
3218	756476.38	689297.01	70.26	-	PL-06
3219	756474.58	689284.94	69.39	-	SAN-21
3220	756469.99	689255.22	67.60	-	SAN-22
3221	756469.30	689251.72	67.38	-	MH-01
3228	756654.12	689380.21	79.27	78.97	MW-25B
3229	756600.87	689235.16	79.29	-	SS-407
3230	756607.04	689246.49	79.05	-	SS-405
3231	756612.86	689254.98	79.00	-	SS-403
3232	756619.08	689270.32	78.19	-	SS-400
3233	756616.36	689266.74	78.37	-	SS-401
3234	756611.63	689258.61	78.58	-	SS-402
3235	756606.00	689251.24	78.79	-	SS-404
3236	756602.74	689248.22	78.97	-	SS-406
3237	756597.08	689238.77	79.06	-	SS-408
3242	756565.80	689465.06	76.49	76.30	MW-504/GS-504
3243	756616.82	689402.42	76.44	76.27	MW-501/GS-501
3245	756617.84	689386.98	76.49	-	GS-502
3246	756632.92	689397.80	76.56	-	GS-500
3247	756615.49	689377.08	76.55	-	GS-503
3248	755937.12	688983.35	55.17	-	MH-04/PS-02
3249	755951.45	688980.69	55.04	-	MH-03/PS-03
3250	755919.78	688971.63	54.55	-	
3251	755894.89	688954.42	53.82	-	PL-01
3252	755878.34	688942.91	53.52	-	PB-01
3253	755833.71	688912.22	52.79	-	SAN-04
3254	755802.96	688891.11	52.46	-	PB-02
3256	755721.85	688835.10	51.57	-	MH-06/PS-05
3258	756556.92	689491.61	87.13	-	MW-505/GS-505

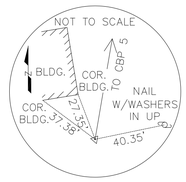
Horizontal Coordinates reference to the New York State Plane Coordinate System, East Zone (3101) based on NAD 83 (2011). Vertical Datum is NAVD88. Horizontal and Vertical control was established by NYSNET RTK.

MATCHLINE SHEET 1

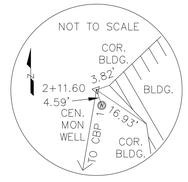


SAMPLE LOCATIONS 4-25-13				
Pnt.	Northing	Easting	Elev.	Desc.
318	756596.7	689334.7	75.65	SS-208
319	756608.7	689326.6	76.15	SS-200
320	756615.1	689322.2	75.99	GS-18
321	756625.2	689314.1	76.98	SS-209
322	756604.1	689320.5	76.81	SS-202
323	756597.0	689324.4	75.45	SS-203
324	756601.7	689330.5	75.97	SS-201
357	756608.5	689296.5	73.73	SS-105
358	756608.3	689290.1	74.45	SS-205
374	756609.8	689307.9	73.94	SS-101
375	756602.8	689303.9	73.22	SS-206
377	756603.2	689312.6	74.68	SS-102
395	756600.6	689278.0	71.56	SS-107
396	756578.9	689275.4	71.07	SS-108
399	756601.1	689285.2	72.77	SS-106
400	756596.6	689290.9	72.71	SS-207
401	756585.7	689299.7	72.87	SS-104
402	756589.1	689313.8	73.47	SS-100
403	756602.7	689303.8	73.25	SS-206

Horizontal Coordinates reference to the New York State Plane Coordinate System, East Zone (3101) based on NAD 83 (2011). Vertical Datum is NAVD88. Horizontal and Vertical control was established by NYSNET RTK.



CBP 1
STA 1+00.00
N 756495.844
E 689330.736
ELEV. 72.64
MN SET IN PAVE

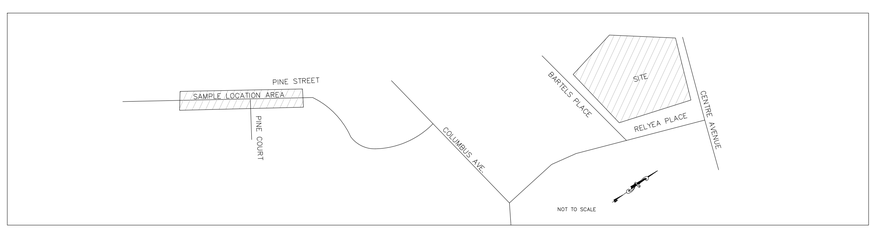


CBP 5
STA 2+11.60
N 756605.856
E 689349.498
ELEV. 76.29
MN SET IN PAVE

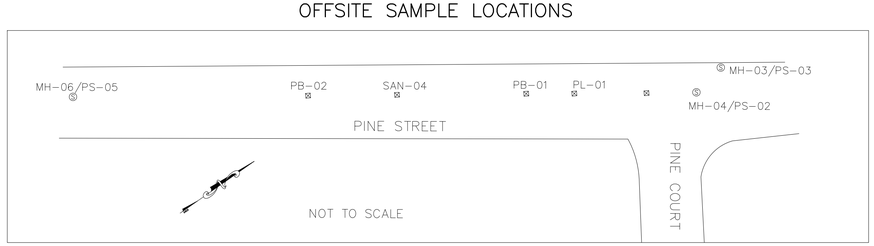
SAMPLE LOCATIONS 4-7-15					
Pnt.	Northing	Easting	Ground Elev.	PVC RISER PIPE ELEV.	Desc.
3027	756616.6	689289.6	77.87	-	SS-302
3028	756620.3	689295.5	77.56	-	SS-301
3029	756625.5	689300.0	78.27	-	SS-300
3057	756520.9	689349.5	75.29	75.03	BR-101
3059	756466.2	689344.0	74.03	73.84	BR-102
3062	756496.5	689381.5	77.28	-	GS/GW-40
3063	756511.6	689394.9	78.32	78.06	PZ-39 RIM
3065	756511.7	689398.1	78.76	78.51	PZ/GS-38
3068	756526.1	689402.6	76.82	76.59	PZ/GS-34
3069	756528.6	689395.4	76.86	76.62	PZ/GS-35
3071	756541.0	689380.0	76.78	76.45	PZ/GS-36
3074	756536.7	689440.2	76.71	76.35	PZ/GS-33
3075	756537.1	689397.8	76.79	-	GS-37

Horizontal Coordinates reference to the New York State Plane Coordinate System, East Zone (3101) based on NAD 83 (2011). Vertical Datum is NAVD88. Horizontal and Vertical control was established by NYSNET RTK.

OFFSITE SAMPLE LOCATION MAP



OFFSITE SAMPLE LOCATIONS



LEGEND

- BM — BENCHMARK
- MH — MANHOLE (UNKNOWN)
- VA — VALVE (UNKNOWN)
- C — COMMUNICATIONS MANHOLE
- CONTROL POINT
- E — ELECTRIC MANHOLE
- GV — GAS VALVE
- G_X — GAS LINE
- CATCH BASIN SQUARE
- UTILITY POLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- TP / PT — TEST HOLE
- CU_X — UNDERGROUND CABLE
- SS_X — SANITARY SEWER
- W_X — WATER LINE
- W — MONITORING WELL
- STREET RIGHT-OF-WAY
- R_X — STREET RIGHT-OF-WAY
- E_X — ELECTRIC LINE
- X — CHAINLINK FENCE
- FIRE HYDRANT

NEW DESCRIPTION OF THE SURVEYED PROPERTY

A NEW DESCRIPTION WAS PREPARED WITH BEARINGS REFERENCE TO TRUE NORTH AT THE 74°30' MERIDIAN OF WEST LONGITUDE.

ALL THAT TRACT OR PARCEL OF LAND, SITUATE IN THE CITY OF NEW ROCHELLE, COUNTY OF WESTCHESTER AND STATE OF NEW YORK, BEING LOTS 9,10,11,12, GORE C AND PORTIONS OF LOTS 7,8,13 AND GORE B ON A CERTAIN MAP ENTITLED "MAP OF PROPERTY BELONGING TO THE ESTATE OF MARIA R. LAWTON, DECEASED, AT NEW ROCHELLE, NEW YORK", DATED APRIL 16, 1884 AND FILED IN THE OFFICE OF THE CLERK OF THE COUNTY OF WESTCHESTER, DIVISION OF LAND RECORDS, JANUARY 12, 1886 IN VOLUME 6 OF MAPS AT PAGE 58, AND BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT FORMED BY THE INTERSECTION OF THE SOUTHWESTERLY SIDE OF CENTRE AVENUE AND THE NORTHWESTERLY SIDE OF RELYEA PLACE (FORMERLY GUION PLACE) AS SHOWN ON SAID MAP;

THENCE FROM SAID POINT OF BEGINNING N 70°46'10" W ALONG THE WESTERLY SIDE OF SAID CENTRE AVENUE A DISTANCE OF 90.67' LANDS NOW OR FORMERLY OF CONSOLIDATED RAIL CORP.;

THENCE SOUTHWESTERLY ALONG THE SOUTHERLY LINE OF SAID CONSOLIDATED RAIL CORP. THE FOLLOWING (3) COURSES AND DISTANCES; (1) ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 2270.98', A DISTANCE OF 113.83' TO A POINT; (2) THENCE N 70°46'10" W A DISTANCE OF 11.62' TO A POINT; (3) THENCE S 82°13'34" W, A DISTANCE OF 25.00' TO A POINT ON THE DIVIDING LINE OF LOTS 14 AND 13 ON SAID MAP;

THENCE SOUTHERLY ALONG THE SAID DIVISION LINE BETWEEN LOTS 14 AND 13, S 08°17'10" E, A DISTANCE OF 99.40' TO A POINT ON THE NORTHERLY LINE OF BARTELS PLACE (FORMERLY FRANKLIN STREET);

THENCE EASTERLY ALONG THE SAID NORTHERLY LINE OF BARTELS PLACE, N 81°42'50" E, A DISTANCE OF 150.00'TO A POINT ON THE NORTHWESTERLY SIDE OF SAID RELYEA PLACE;

THENCE NORTHERLY ALONG THE SAID EASTERLY LINE OF RELYEA PLACE, N 19°12'50" E, A DISTANCE OF 130.21'TO THE POINT AND PLACE OF BEGINNING.

CONTAINING 0.523 ACRES OF LAND, MORE OR LESS.

SUBJECT TO ANY EASEMENTS, RIGHT-OF-WAYS, AND/OR RESTRICTIONS OF RECORD, WHICH MAY AFFECT THIS PROPERTY.

REFERENCES:

1. ABSTRACT OF TITLE PREPARED BY REDVISION, DATED 3/14/2013.

NOTES:

1. HORIZONTAL COORDINATES REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM (NYSNET), EAST ZONE (3101) BASED ON NAD 83 (2011).

2. VERTICAL DATUM BASED ON NAVD 88 (NYSNET).

3. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM A COMBINATION OF FIELD MEASUREMENTS, AVAILABLE MAPS, RECORDS AND INFORMATION PROVIDED BY THE OWNER, THEREFORE THEIR LOCATION AND TYPE OF USE SHOULD BE CONSIDERED APPROXIMATE ONLY, THERE ALSO MAY BE OTHER FACILITIES, STRUCTURES OR UTILITIES THE EXISTENCE OF WHICH IS PRESENTLY UNKNOWN.

THE UNDERSIGNED SURVEYOR HEREBY CERTIFIES TO THE PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH THE COMMISIONER OF THE DEPARTMENT OF ENVIROMENTAL CONSERVATION THAT THIS IS AN ACCURATE MAP OF AN ACTUAL SURVEY COMPLETED 6/12/2013. SUBJECT TO ANY STATE OF FACTS AN ACCURATE ABSTRACT DATED AFTER 3/14/2013 MAY SHOW.

STATE OF NEW YORK * MICHAEL ANTHONY VERTINO * 50079 * LICENSED LAND SURVEYOR

6/21/13

REF.

Boundary & Partial Topographic Survey Map

Bartels Place

New Rochelle, NY

Part of ------
County of Westchester
Scale of 1 inch = 10'

TOWN New Rochelle
State of New York
Date 9/23/13 - REV. 2/14/14 - REV. 4/16/15 - 11/5/15

"Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of section 7209, sub-division 2, of the New York State Education Law." "Copies from the original of this survey map not marked with an original of the of the land surveyor's inked seal or his embossed seal shall not be considered a valid true copy."

PHONE: (315) 432-9823
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6390 FLY ROAD
EAST SYRACUSE, N.Y. 13057
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PRUDENT ENGINEERING

CADD File Name: M:\Drawings\109\005\Phase 02 – Industrial Overall Service Corp.DWG

IN CHARGE OF ____ DESIGNED BY M.A.V. ____ DRAFTED BY B.G.P. ____ CHECKED BY ____ CHECKED BY ____ ESTIMATED BY

APPENDIX E

DATA USABILITY SUMMARY REPORTS

CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

1.0 INTRODUCTION

Soil and groundwater samples were collected in October 2015 at the Industrial Overall Uniform Corporation Site (Site) in New Rochelle, New York, and shipped to TestAmerica Buffalo Laboratory located in Amherst, New York, for analysis. Samples were analyzed by one or more of the following methods:

- Volatile Organic Compounds (VOCs) by Method 8260C
- Percent Moisture/Solids by Method D2216

Results were reported in the following sample delivery groups (SDG):

- 480-89582-1
- 480-89781-1
- 480-90144-1

Sample event information included in this chemistry review is presented in the following Tables:

- Table 1 – Summary of Samples and Analytical Methods
- Table 2 – Summary of Analytical Results
- Table 3 – Summary of Qualification Actions.

Laboratory deliverables included:

- Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 2005).

The Category A review included the following evaluations. Data review checklists are provided as Attachment A.

- Lab Report Narrative Review
- Data Package Completeness and COC records (Table 1 verification)
- Sample Preservation and Holding Times
- QC Blanks
- Field Duplicate Evaluation
- Matrix spike and Matrix Spike Duplicate (MS/MSD) Evaluation
- Reporting Limits
- Electronic Data Qualification and Verification

The following laboratory data qualifiers or data review qualifiers are used in the final data presentation:

U = target analyte is not detected at or above the reporting limit
J = concentration is estimated

Based on information received from the AMECFW technical lead; the following field sample IDs were changed and updated in the electronic database (TEDs) during the Category A review: Sample 360109-US5061016 was changed to 360109-GS506016, and all samples reported by the lab with "US" in the field IDs were changed to "GS" in the field IDs to match the chain of custody documentation.

2.0 POTENTIAL DATA LIMITATIONS

Based on the Category A Review conducted the data meet the data quality objectives; however, the following potential limitations were identified:

- Matrix spikes were performed on a subset of samples by the laboratory as batch quality control samples. The laboratory qualified a subset of results with percent recoveries and/or RPDs outside of lab limits. MS/MSD results were evaluated and if qualified estimated (J/UJ) during the review are presented in Table 3. MS/MSD results indicate that tetrachloroethene results are potentially biased high.

- All aqueous samples (PZ) and groundwater samples 360109-MW-50522 and 360109-MW-50410 were analyzed at dilutions due to high concentrations of one or more of the following target analytes:
  1,1,1-trichloroethane
  1,1-dichloroethene
  tetrachloroethene
  trichloroethene
  cis-1,2-dichloroethene
  1,1-dichloroethane
  Target compounds have elevated reporting limits as indicated in Table 2.

- Results for tetrachloroethene in samples 360109-SS-407006 and 360109-SS-401011 were qualified non-detect (U) based on blank contamination.

- Results for all target analytes in the initial undiluted analyses of samples 360109-GS506011, 360109-GS506011D, 360109-GS506016, and 360109-GS507012 were qualified estimated (J/UJ) based on two or more surrogate recoveries that were below 70 percent. Low biases are indicated for these analytes.

Reference:

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; July 2005.

Data Validator: Julie Ricardi

Julie Ricardi

Date: 11/18/2015

Reviewed by: Christian Ricardi, NRCC-EAC

Chris Ricardi

Date: 11/18/2015

TABLE 1 - SUMMARY OF SAMPLES AND ANALYTICAL METHODS
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

					Method Class	VOCs	Solids
					Analysis Method	SW8260C	D2216
					Fraction	N	N
SDG	Media	Location	Sample ID	Sample Date	Qc Code	Param_Count	Param_Count
480-89582-1	SOIL	DC-1	360109-DC001	10/18/2015	FS	48	2
480-89582-1	SOIL	DC-2	360109-DC002	10/18/2015	FS	48	2
480-89582-1	SOIL	DC-3	360109-DC003	10/18/2015	FS	48	2
480-89582-1	SOIL	DC-4	360109-DC004	10/18/2015	FS	48	2
480-89582-1	SOIL	SS-500	360109-GS-500003	10/17/2015	FS	48	2
480-89582-1	SOIL	SS-500	360109-GS-500007	10/17/2015	FS	48	2
480-89582-1	SOIL	SS-500	360109-GS-500008	10/17/2015	FS	48	2
480-89582-1	SOIL	SS-501	360109-GS-501001	10/17/2015	FS	48	2
480-89582-1	SOIL	SS-502	360109-GS-502003	10/17/2015	FS	48	2
480-89582-1	SOIL	SS-504	360109-GS-504001	10/18/2015	FS	48	2
480-89582-1	SOIL	SS-504	360109-GS-504005	10/18/2015	FS	48	2
480-89582-1	SOIL	SS-504	360109-GS-504008	10/18/2015	FS	48	2
480-89582-1	SOIL	SS-505	360109-GS-505003	10/18/2015	FS	48	2
480-89582-1	SOIL	SS-505	360109-GS-505009	10/18/2015	FS	48	2
480-89582-1	SOIL	SS-505	360109-GS-505012	10/18/2015	FS	48	2
480-89582-1	GW	PZ-22	360109-PZ-2216	10/18/2015	FS	48	
480-89582-1	GW	PZ-33	360109-PZ-3315	10/18/2015	FS	48	
480-89582-1	GW	PZ-34	360109-PZ-3409	10/17/2015	FS	48	
480-89582-1	GW	PZ-34	360109-PZ-3409D	10/17/2015	FD	48	
480-89582-1	GW	PZ-35	360109-PZ-3527	10/17/2015	FS	48	
480-89582-1	BW	QC	QC-TB10172015-XX	10/17/2015	TB	48	
480-89781-1	SOIL	GW-301	360109-GW-30114	10/22/2015	FS	48	
480-89781-1	SOIL	GW-408	360109-GW-40815	10/22/2015	FS	48	
480-89781-1	SOIL	MH-001	360109-MH001010	10/20/2015	FS	48	2
480-89781-1	SOIL	SS-301	360109-SS-301006	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-301	360109-SS-301006D	10/22/2015	FD	48	2
480-89781-1	SOIL	SS-301	360109-SS-301010	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-301	360109-SS-301012	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-400	360109-SS-400000	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-400	360109-SS-400005	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-400	360109-SS-400012	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-401	360109-SS-401000	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-401	360109-SS-401006	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-401	360109-SS-401011	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-402	360109-SS-402000	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-402	360109-SS-402006	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-402	360109-SS-402011	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-403	360109-SS-403000	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-403	360109-SS-403006	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-403	360109-SS-403012	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-404	360109-SS-404000	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-404	360109-SS-404006	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-404	360109-SS-404011	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-405	360109-SS-405000	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-405	360109-SS-405008	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-405	360109-SS-405012	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-406	360109-SS-406000	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-406	360109-SS-406006	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-406	360109-SS-406011	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-407	360109-SS-407000	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-407	360109-SS-407006	10/22/2015	FS	48	2

TABLE 1 - SUMMARY OF SAMPLES AND ANALYTICAL METHODS
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

					Method Class	VOCs	Solids
					Analysis Method	SW8260C	D2216
					Fraction	N	N
SDG	**Media**	**Location**	**Sample ID**	**Sample Date**	**Qc Code**	Param_Count	Param_Count
480-89781-1	SOIL	SS-407	360109-SS-407006D	10/22/2015	FD	48	2
480-89781-1	SOIL	SS-407	360109-SS-407012	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-408	360109-SS-408000	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-408	360109-SS-408007	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-408	360109-SS-408011	10/22/2015	FS	48	2
480-89781-1	SOIL	SS-506	360109-GS-506003	10/21/2015	FS	48	2
480-89781-1	SOIL	SS-506	360109-GS-506011	10/21/2015	FS	48	2
480-89781-1	SOIL	SS-506	360109-GS-506011D	10/21/2015	FD	48	2
480-89781-1	SOIL	SS-506	360109-GS-506016	10/21/2015	FS	48	2
480-89781-1	SOIL	SS-507	360109-GS-507003	10/21/2015	FS	48	2
480-89781-1	SOIL	SS-507	360109-GS-507009	10/21/2015	FS	48	2
480-89781-1	SOIL	SS-507	360109-GS-507012	10/21/2015	FS	48	2
480-89781-1	SOIL	SS-508	360109-GS-508013	10/21/2015	FS	48	2
480-89781-1	NA-S	QC	QC-TB10202015-XX	10/20/2015	TB	48	
480-89781-1	NA-S	QC	QC-TB102215-XX	10/22/2015	TB	48	
480-90144-1	GW	MW-501	360109-MW-50102	10/27/2015	FS	48	
480-90144-1	GW	MW-504	360109-MW-50410	10/27/2015	FS	48	
480-90144-1	GW	MW-505	360109-MW-50522	10/27/2015	FS	48	
480-90144-1	NA-S	QC	QC-TB102615-XX	10/26/2015	TB	48	
480-90144-1	BW	QC	QC-TB102715-XX	10/27/2015	TB	48	
480-90144-1	SOIL	SS-503	360109-GS-503003	10/26/2015	FS	48	2
480-90144-1	SOIL	SS-503	360109-GS-503006	10/26/2015	FS	48	2

NOTES:
GW = groundwater
BW = blank water
NA-S = solid
FS = field sample
FD = field duplicate
TB = trip blank
Param_Count = number of target analytes reported

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89582-1 AQUEOUS
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89582-1		480-89582-1		480-89582-1		480-89582-1	
		Location	PZ-22		PZ-33		PZ-34		PZ-34	
		Sample Date	10/18/2015		10/18/2015		10/17/2015		10/17/2015	
		Sample ID	360109-PZ-2216		360109-PZ-3315		360109-PZ-3409		360109-PZ-3409D	
		Qc Code	FS		FS		FS		FD	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/l	50	U	570		200	U	200	U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	50	U	1	U	200	U	200	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	50	U	2.2		200	U	200	U
VOCs	1,1,2-Trichloroethane	ug/l	50	U	1	U	200	UJ	320	J
VOCs	1,1-Dichloroethane	ug/l	50	U	29		200	U	200	U
VOCs	1,1-Dichloroethene	ug/l	50	U	890		200	U	200	U
VOCs	1,2,4-Trichlorobenzene	ug/l	50	U	1	U	200	U	200	U
VOCs	1,2-Dibromo-3-chloropropane	ug/l	50	U	1	U	200	U	200	U
VOCs	1,2-Dibromoethane	ug/l	50	U	1	U	200	U	200	U
VOCs	1,2-Dichlorobenzene	ug/l	50	U	1	U	200	U	200	U
VOCs	1,2-Dichloroethane	ug/l	50	U	2		200	U	200	U
VOCs	1,2-Dichloropropane	ug/l	50	U	1	U	200	U	200	U
VOCs	1,3-Dichlorobenzene	ug/l	50	U	1	U	200	U	200	U
VOCs	1,4-Dichlorobenzene	ug/l	50	U	1	U	200	U	200	U
VOCs	2-Butanone	ug/l	500	U	10	U	2000	U	2000	U
VOCs	2-Hexanone	ug/l	250	U	5	U	1000	U	1000	U
VOCs	4-Methyl-2-pentanone	ug/l	250	U	5	U	1000	U	1000	U
VOCs	Acetic acid, methyl ester	ug/l	130	U	2.5	U	500	U	500	U
VOCs	Acetone	ug/l	500	U	10	U	2000	U	2000	U
VOCs	Benzene	ug/l	50	U	1	U	200	U	200	U
VOCs	Bromodichloromethane	ug/l	50	U	1	U	200	U	200	U
VOCs	Bromoform	ug/l	50	U	1	U	200	U	200	U
VOCs	Bromomethane	ug/l	50	UJ	1	U	200	U	200	U
VOCs	Carbon disulfide	ug/l	50	U	1	U	200	U	200	U
VOCs	Carbon tetrachloride	ug/l	50	U	1	U	200	U	200	U
VOCs	Chlorobenzene	ug/l	50	U	1	U	200	U	200	U
VOCs	Chloroethane	ug/l	50	U	1	U	200	U	200	U
VOCs	Chloroform	ug/l	50	U	2.8		200	U	200	U
VOCs	Chloromethane	ug/l	50	U	1	U	200	U	200	U
VOCs	Cis-1,2-Dichloroethene	ug/l	50	U	1	U	27000		25000	
VOCs	Cis-1,3-Dichloropropene	ug/l	50	U	1	U	200	U	200	U
VOCs	Cyclohexane	ug/l	50	U	1	U	200	U	200	U
VOCs	Dibromochloromethane	ug/l	50	U	1	U	200	U	200	U
VOCs	Dichlorodifluoromethane	ug/l	50	U	1	U	200	U	200	U
VOCs	Ethylbenzene	ug/l	50	U	1	U	200	U	200	U
VOCs	Isopropylbenzene	ug/l	50	U	1	U	200	U	200	U
VOCs	Methyl cyclohexane	ug/l	50	U	0.21	J	200	U	200	U
VOCs	Methyl Tertbutyl Ether	ug/l	50	U	1	U	200	U	200	U
VOCs	Methylene chloride	ug/l	50	U	1	U	200	U	200	U
VOCs	Styrene	ug/l	50	U	1	U	200	U	200	U
VOCs	Tetrachloroethene	ug/l	5,700	J	130		17,000		16,000	
VOCs	Toluene	ug/l	50	U	1	U	200	U	200	U
VOCs	trans-1,2-Dichloroethene	ug/l	50	U	1	U	200	U	200	U
VOCs	trans-1,3-Dichloropropene	ug/l	50	U	1	U	200	U	200	U
VOCs	Trichloroethene	ug/l	50	U	2000		13000		12000	
VOCs	Trichlorofluoromethane	ug/l	50	U	1	U	200	U	200	U
VOCs	Vinyl chloride	ug/l	50	U	1	U	1600		1500	
VOCs	Xylenes, Total	ug/l	100	U	2	U	400	U	400	U

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89582-1 AQUEOUS
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89582-1		480-89582-1	
		Location	PZ-35		QC	
		Sample Date	10/17/2015		10/17/2015	
		Sample ID	360109-PZ-3527		QC-TB10172015-XX	
		Qc Code	FS		TB	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/l	17		1	U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	1	U	1	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U
VOCs	1,1,2-Trichloroethane	ug/l	36		1	U
VOCs	1,1-Dichloroethane	ug/l	3.5		1	U
VOCs	1,1-Dichloroethene	ug/l	32		1	U
VOCs	1,2,4-Trichlorobenzene	ug/l	1	U	1	U
VOCs	1,2-Dibromo-3-chloropropane	ug/l	1	U	1	U
VOCs	1,2-Dibromoethane	ug/l	1	U	1	U
VOCs	1,2-Dichlorobenzene	ug/l	1	U	1	U
VOCs	1,2-Dichloroethane	ug/l	0.25	J	1	U
VOCs	1,2-Dichloropropane	ug/l	1	U	1	U
VOCs	1,3-Dichlorobenzene	ug/l	1	U	1	U
VOCs	1,4-Dichlorobenzene	ug/l	1	U	1	U
VOCs	2-Butanone	ug/l	10	U	10	U
VOCs	2-Hexanone	ug/l	5	U	5	U
VOCs	4-Methyl-2-pentanone	ug/l	5	U	5	U
VOCs	Acetic acid, methyl ester	ug/l	2.5	U	2.5	U
VOCs	Acetone	ug/l	10	U	10	U
VOCs	Benzene	ug/l	1	U	1	U
VOCs	Bromodichloromethane	ug/l	1	U	1	U
VOCs	Bromoform	ug/l	1	U	1	U
VOCs	Bromomethane	ug/l	1	U	1	U *
VOCs	Carbon disulfide	ug/l	1	U	1	U
VOCs	Carbon tetrachloride	ug/l	1	U	1	U
VOCs	Chlorobenzene	ug/l	1	U	1	U
VOCs	Chloroethane	ug/l	1	U	1	U
VOCs	Chloroform	ug/l	1	U	1	U
VOCs	Chloromethane	ug/l	1	U	1	U
VOCs	Cis-1,2-Dichloroethene	ug/l	29		1	U
VOCs	Cis-1,3-Dichloropropene	ug/l	1	U	1	U
VOCs	Cyclohexane	ug/l	1	U	1	U
VOCs	Dibromochloromethane	ug/l	1	U	1	U
VOCs	Dichlorodifluoromethane	ug/l	1	U	1	U
VOCs	Ethylbenzene	ug/l	1	U	1	U
VOCs	Isopropylbenzene	ug/l	1	U	1	U
VOCs	Methyl cyclohexane	ug/l	0.21	J	1	U
VOCs	Methyl Tertbutyl Ether	ug/l	0.21	J	1	U
VOCs	Methylene chloride	ug/l	1	U	0.61	J
VOCs	Styrene	ug/l	1	U	1	U
VOCs	Tetrachloroethene	ug/l	2,900		1	U
VOCs	Toluene	ug/l	1	U	1	U
VOCs	trans-1,2-Dichloroethene	ug/l	1	U	1	U
VOCs	trans-1,3-Dichloropropene	ug/l	1	U	1	U
VOCs	Trichloroethene	ug/l	28		1	U
VOCs	Trichlorofluoromethane	ug/l	1	U	1	U
VOCs	Vinyl chloride	ug/l	1	U	1	U
VOCs	Xylenes, Total	ug/l	2	U	2	U

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89582-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89582-1		480-89582-1		480-89582-1		480-89582-1		480-89582-1		480-89582-1	
		Location	DC-1		DC-2		DC-3		DC-4		QC		SS-500	
		Sample Date	10/18/2015		10/18/2015		10/18/2015		10/18/2015		10/17/2015		10/17/2015	
		Sample ID	360109-DC001		360109-DC002		360109-DC003		360109-DC004		QC-TB10172015-XX		360109-GS-500003	
		Qc Code	FS		FS		FS		FS		TB		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,1,2-Trichloroethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,1-Dichloroethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,1-Dichloroethene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,2,4-Trichlorobenzene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,2-Dibromoethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,2-Dichlorobenzene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,2-Dichloroethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,2-Dichloropropane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,3-Dichlorobenzene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	1,4-Dichlorobenzene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	2-Butanone	ug/kg	270	U	600	U	650	U	610	U	250	U	150	U
VOCs	2-Hexanone	ug/kg	270	U	600	U	650	U	610	U	250	U	150	U
VOCs	4-Methyl-2-pentanone	ug/kg	270	U	600	U	650	U	610	U	250	U	150	U
VOCs	Acetic acid, methyl ester	ug/kg	64		120	U	1300		140		50	U	31	U
VOCs	Acetone	ug/kg	270	U	600	U	650	U	610	U	250	U	150	U
VOCs	Benzene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Bromodichloromethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Bromoform	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Bromomethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Carbon disulfide	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Carbon tetrachloride	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Chlorobenzene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Chloroethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Chloroform	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Chloromethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Cis-1,2-Dichloroethene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Cis-1,3-Dichloropropene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Cyclohexane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Dibromochloromethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Dichlorodifluoromethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Ethylbenzene	ug/kg	55	U	51	J	130	U	120	U	50	U	31	U
VOCs	Isopropylbenzene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Methyl cyclohexane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Methyl Tertbutyl Ether	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Methylene chloride	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89582-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89582-1		480-89582-1		480-89582-1		480-89582-1		480-89582-1		480-89582-1	
		Location	DC-1		DC-2		DC-3		DC-4		QC		SS-500	
		Sample Date	10/18/2015		10/18/2015		10/18/2015		10/18/2015		10/17/2015		10/17/2015	
		Sample ID	360109-DC001		360109-DC002		360109-DC003		360109-DC004		QC-TB10172015-XX		360109-GS-500003	
		Qc Code	FS		FS		FS		FS		TB		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	ug/kg	55	U	160		130	U	120	U	50	U	31	U
VOCs	Tetrachloroethene	ug/kg	1,200		270		380		120	U	50	U	28	J
VOCs	Toluene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	trans-1,2-Dichloroethene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	trans-1,3-Dichloropropene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Trichloroethene	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Trichlorofluoromethane	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Vinyl chloride	ug/kg	55	U	120	U	130	U	120	U	50	U	31	U
VOCs	Xylenes, Total	ug/kg	110	U	180	J	260	U	240	U	100	U	61	U
Solids	Percent Moisture	Percent	4.6		3.1		49		48				9.1	
Solids	Percent Solids	Percent	95		97		51		52				91	

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89582-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89582-1		480-89582-1		480-89582-1		480-89582-1		480-89582-1		480-89582-1	
		Location	SS-500		SS-500		SS-501		SS-502		SS-504		SS-504	
		Sample Date	10/17/2015		10/17/2015		10/17/2015		10/17/2015		10/18/2015		10/18/2015	
		Sample ID	360109-GS-500007		360109-GS-500008		360109-GS-501001		360109-GS-502003		360109-GS-504001		360109-GS-504005	
		Qc Code	FS		FS		FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	30	U	36	U	48	U	51	U	110		110	
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,1,2-Trichloroethane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,1-Dichloroethane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,1-Dichloroethene	ug/kg	30	U	36	U	48	U	51	U	77		35	
VOCs	1,2,4-Trichlorobenzene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,2-Dibromoethane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,2-Dichlorobenzene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,2-Dichloroethane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,2-Dichloropropane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,3-Dichlorobenzene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	1,4-Dichlorobenzene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	2-Butanone	ug/kg	150	U	180	U	240	U	260	U	160	U	160	U
VOCs	2-Hexanone	ug/kg	150	U	180	U	240	U	260	U	160	U	160	U
VOCs	4-Methyl-2-pentanone	ug/kg	150	U	180	U	240	U	260	U	160	U	160	U
VOCs	Acetic acid, methyl ester	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Acetone	ug/kg	150	U	180	U	240	U	260	U	160	U	160	U
VOCs	Benzene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Bromodichloromethane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Bromoform	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Bromomethane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Carbon disulfide	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Carbon tetrachloride	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Chlorobenzene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Chloroethane	ug/kg	30	U	36	U	48	UJ	51	U	32	U	31	U
VOCs	Chloroform	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Chloromethane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Cis-1,2-Dichloroethene	ug/kg	13	J	36	U	48	U	51	U	32	U	31	U
VOCs	Cis-1,3-Dichloropropene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Cyclohexane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Dibromochloromethane	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Dichlorodifluoromethane	ug/kg	30	U	36	U	48	UJ	51	U	32	U	31	U
VOCs	Ethylbenzene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Isopropylbenzene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Methyl cyclohexane	ug/kg	94		26	J	48	U	51	U	32	U	31	U
VOCs	Methyl Tertbutyl Ether	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Methylene chloride	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89582-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89582-1		480-89582-1		480-89582-1		480-89582-1		480-89582-1		480-89582-1	
		Location	SS-500		SS-500		SS-501		SS-502		SS-504		SS-504	
		Sample Date	10/17/2015		10/17/2015		10/17/2015		10/17/2015		10/18/2015		10/18/2015	
		Sample ID	360109-GS-500007		360109-GS-500008		360109-GS-501001		360109-GS-502003		360109-GS-504001		360109-GS-504005	
		Qc Code	FS		FS		FS		FS		FS		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Tetrachloroethene	ug/kg	30	U	36	U	3,300	J	46	J	150		5	J
VOCs	Toluene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	trans-1,2-Dichloroethene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	trans-1,3-Dichloropropene	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Trichloroethene	ug/kg	30	U	36	U	48	U	51	U	2800		970	
VOCs	Trichlorofluoromethane	ug/kg	30	U	36	U	48	UJ	51	U	32	U	31	U
VOCs	Vinyl chloride	ug/kg	30	U	36	U	48	U	51	U	32	U	31	U
VOCs	Xylenes, Total	ug/kg	59	U	72	U	97	U	100	U	63	U	63	U
Solids	Percent Moisture	Percent	9		5		12		10		10		9	
Solids	Percent Solids	Percent	91		95		88		90		90		91	

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89582-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89582-1		480-89582-1		480-89582-1		480-89582-1	
		Location	SS-504		SS-505		SS-505		SS-505	
		Sample Date	10/18/2015		10/18/2015		10/18/2015		10/18/2015	
		Sample ID	360109-GS-504008		360109-GS-505003		360109-GS-505009		360109-GS-505012	
		Qc Code	FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	190		38	U	39	U	74	
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,1,2-Trichloroethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,1-Dichloroethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,1-Dichloroethene	ug/kg	160		38	U	39	U	21	J
VOCs	1,2,4-Trichlorobenzene	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,2-Dibromoethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,2-Dichlorobenzene	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,2-Dichloroethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,2-Dichloropropane	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,3-Dichlorobenzene	ug/kg	31	U	38	U	39	U	39	U
VOCs	1,4-Dichlorobenzene	ug/kg	31	U	38	U	39	U	39	U
VOCs	2-Butanone	ug/kg	160	U	190	U	190	U	190	U
VOCs	2-Hexanone	ug/kg	160	U	190	U	190	U	190	U
VOCs	4-Methyl-2-pentanone	ug/kg	160	U	190	U	190	U	190	U
VOCs	Acetic acid, methyl ester	ug/kg	31	U	38	U	39	U	39	U
VOCs	Acetone	ug/kg	160	U	190	U	190	U	190	U
VOCs	Benzene	ug/kg	31	U	38	U	39	U	39	U
VOCs	Bromodichloromethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	Bromoform	ug/kg	31	U	38	U	39	U	39	U
VOCs	Bromomethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	Carbon disulfide	ug/kg	31	U	38	U	39	U	39	U
VOCs	Carbon tetrachloride	ug/kg	31	U	38	U	39	U	39	U
VOCs	Chlorobenzene	ug/kg	31	U	38	U	39	U	39	U
VOCs	Chloroethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	Chloroform	ug/kg	31	U	38	U	39	U	39	U
VOCs	Chloromethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	Cis-1,2-Dichloroethene	ug/kg	31	U	38	U	39	U	39	U
VOCs	Cis-1,3-Dichloropropene	ug/kg	31	U	38	U	39	U	39	U
VOCs	Cyclohexane	ug/kg	31	U	38	U	39	U	39	U
VOCs	Dibromochloromethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	Dichlorodifluoromethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	Ethylbenzene	ug/kg	31	U	38	U	39	U	39	U
VOCs	Isopropylbenzene	ug/kg	31	U	38	U	39	U	39	U
VOCs	Methyl cyclohexane	ug/kg	31	U	38	U	39	U	39	U
VOCs	Methyl Tertbutyl Ether	ug/kg	31	U	38	U	39	U	39	U
VOCs	Methylene chloride	ug/kg	31	U	38	U	39	U	39	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89582-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89582-1		480-89582-1		480-89582-1		480-89582-1	
		Location	SS-504		SS-505		SS-505		SS-505	
		Sample Date	10/18/2015		10/18/2015		10/18/2015		10/18/2015	
		Sample ID	360109-GS-504008		360109-GS-505003		360109-GS-505009		360109-GS-505012	
		Qc Code	FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	ug/kg	31	U	38	U	39	U	39	U
VOCs	Tetrachloroethene	ug/kg	5	J	38	U	39	U	39	U
VOCs	Toluene	ug/kg	31	U	38	U	39	U	39	U
VOCs	trans-1,2-Dichloroethene	ug/kg	31	U	38	U	39	U	39	U
VOCs	trans-1,3-Dichloropropene	ug/kg	31	U	38	U	39	U	39	U
VOCs	Trichloroethene	ug/kg	1200		38	U	39	U	420	
VOCs	Trichlorofluoromethane	ug/kg	31	U	38	U	39	U	39	U
VOCs	Vinyl chloride	ug/kg	31	U	38	U	39	U	39	U
VOCs	Xylenes, Total	ug/kg	63	U	76	U	78	U	78	U
Solids	Percent Moisture	Percent	8.7		7.6		9.5		11	
Solids	Percent Solids	Percent	91		92		90		89	

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 AQUEOUS
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1	
		Location	GW-301		GW-408		QC	
		Sample Date	10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-GW-30114		360109-GW-40815		QC-TB102215-XX	
		Qc Code	FS		FS		TB	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/l	1	U	1	U	1	U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	1	U	1	U	1	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U	1	U
VOCs	1,1,2-Trichloroethane	ug/l	1	U	1	U	1	U
VOCs	1,1-Dichloroethane	ug/l	1	U	1	U	1	U
VOCs	1,1-Dichloroethene	ug/l	1	U	1	U	1	U
VOCs	1,2,4-Trichlorobenzene	ug/l	1	U	1	U	1	U
VOCs	1,2-Dibromo-3-chloropropane	ug/l	1	U	1	U	1	U
VOCs	1,2-Dibromoethane	ug/l	1	U	1	U	1	U
VOCs	1,2-Dichlorobenzene	ug/l	1	U	1	U	1	U
VOCs	1,2-Dichloroethane	ug/l	1	U	1	U	1	U
VOCs	1,2-Dichloropropane	ug/l	1	U	1	U	1	U
VOCs	1,3-Dichlorobenzene	ug/l	1	U	1	U	1	U
VOCs	1,4-Dichlorobenzene	ug/l	1	U	1	U	1	U
VOCs	2-Butanone	ug/l	10	U	10	U	10	U *
VOCs	2-Hexanone	ug/l	5	U	5	U	5	U
VOCs	4-Methyl-2-pentanone	ug/l	5	U	5	U	5	U
VOCs	Acetic acid, methyl ester	ug/l	2.5	U	2.5	U	2.5	U
VOCs	Acetone	ug/l	10	U	11	J	10	U *
VOCs	Benzene	ug/l	1	U	1	U	1	U
VOCs	Bromodichloromethane	ug/l	1	U	1	U	1	U
VOCs	Bromoform	ug/l	1	U	1	U	1	U
VOCs	Bromomethane	ug/l	1	U	1	U	1	U
VOCs	Carbon disulfide	ug/l	1	U	1	U	1	U
VOCs	Carbon tetrachloride	ug/l	1	U	1	U	1	U
VOCs	Chlorobenzene	ug/l	1	U	1	U	1	U
VOCs	Chloroethane	ug/l	1	U	1	U	1	U
VOCs	Chloroform	ug/l	1		1	U	1	U
VOCs	Chloromethane	ug/l	1	U	1	U	1	U
VOCs	Cis-1,2-Dichloroethene	ug/l	110		1	U	1	U
VOCs	Cis-1,3-Dichloropropene	ug/l	1	U	1	U	1	U
VOCs	Cyclohexane	ug/l	1	U	1	U	1	U
VOCs	Dibromochloromethane	ug/l	1	U	1	U	1	U
VOCs	Dichlorodifluoromethane	ug/l	1	U	1	U	1	U
VOCs	Ethylbenzene	ug/l	1	U	1	U	1	U
VOCs	Isopropylbenzene	ug/l	1	U	1	U	1	U
VOCs	Methyl cyclohexane	ug/l	1	U	1	U	1	U
VOCs	Methyl Tertbutyl Ether	ug/l	1	U	1	U	1	U
VOCs	Methylene chloride	ug/l	1	U	1	U	1	U
VOCs	Styrene	ug/l	1	U	1	U	1	U
VOCs	Tetrachloroethene	ug/l	500		6		1	U
VOCs	Toluene	ug/l	1	U	1	U	1	U
VOCs	trans-1,2-Dichloroethene	ug/l	3.6		1	U	1	U
VOCs	trans-1,3-Dichloropropene	ug/l	1	U	1	U	1	U
VOCs	Trichloroethene	ug/l	33		0.5	J	1	U
VOCs	Trichlorofluoromethane	ug/l	1	U	1	U	1	U
VOCs	Vinyl chloride	ug/l	1	U	1	U	1	U
VOCs	Xylenes, Total	ug/l	2	U	2	U	2	U

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	MH-001		QC		SS-301		SS-301		SS-301		SS-301	
		Sample Date	10/20/2015		10/20/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-MH001010		QC-TB10202015-XX		360109-SS-301006		360109-SS-301006D		360109-SS-301010		360109-SS-301012	
		Qc Code	FS		TB		FS		FD		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	92	J	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,1,2-Trichloroethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,1-Dichloroethane	ug/kg	180		4.9	U	45	U	52	U	45	U	47	U
VOCs	1,1-Dichloroethene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,2,4-Trichlorobenzene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	150	U	4.9	U	45	UJ	52	UJ	45	UJ	47	U
VOCs	1,2-Dibromoethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,2-Dichlorobenzene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,2-Dichloroethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,2-Dichloropropane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,3-Dichlorobenzene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	1,4-Dichlorobenzene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	2-Butanone	ug/kg	730	U	24	U	230	U	260	U	230	U	240	U
VOCs	2-Hexanone	ug/kg	730	U	24	U	230	U	260	U	230	U	240	U
VOCs	4-Methyl-2-pentanone	ug/kg	730	U	24	U	230	U	260	U	230	U	240	U
VOCs	Acetic acid, methyl ester	ug/kg	700		4.9	U	45	U	52	U	45	U	47	U
VOCs	Acetone	ug/kg	810		9.9	J	230	U	260	U	230	U	240	U
VOCs	Benzene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Bromodichloromethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Bromoform	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Bromomethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Carbon disulfide	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Carbon tetrachloride	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Chlorobenzene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Chloroethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Chloroform	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Chloromethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Cis-1,2-Dichloroethene	ug/kg	100	J	4.9	U	45	U	52	U	45	U	60	
VOCs	Cis-1,3-Dichloropropene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Cyclohexane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Dibromochloromethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Dichlorodifluoromethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Ethylbenzene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Isopropylbenzene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Methyl cyclohexane	ug/kg	98	J	4.9	U	45	U	52	U	45	U	47	U
VOCs	Methyl Tertbutyl Ether	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Methylene chloride	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	MH-001		QC		SS-301		SS-301		SS-301		SS-301	
		Sample Date	10/20/2015		10/20/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-MH001010		QC-TB10202015-XX		360109-SS-301006		360109-SS-301006D		360109-SS-301010		360109-SS-301012	
		Qc Code	FS		TB		FS		FD		FS		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Tetrachloroethene	ug/kg	150	U	2	JB	2,600		3,000		95		290	
VOCs	Toluene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	trans-1,2-Dichloroethene	ug/kg	38	J	4.9	U	45	U	52	U	45	U	47	U
VOCs	trans-1,3-Dichloropropene	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Trichloroethene	ug/kg	150	U	4.9	U	47		55		45	U	20	J
VOCs	Trichlorofluoromethane	ug/kg	150	U	4.9	U	45	U	52	U	45	U	47	U
VOCs	Vinyl chloride	ug/kg	140	J	4.9	U	45	U	52	U	45	U	47	U
VOCs	Xylenes, Total	ug/kg	290	U	9.7	U	91	U	100	U	90	U	95	U
Solids	Percent Moisture	Percent	56				13		16		11		12	
Solids	Percent Solids	Percent	44				87		84		89		88	

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-400		SS-400		SS-400		SS-401		SS-401		SS-401	
		Sample Date	10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-SS-400000		360109-SS-400005		360109-SS-400012		360109-SS-401000		360109-SS-401006		360109-SS-401011	
		Qc Code	FS		FS		FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,1,2-Trichloroethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,1-Dichloroethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,1-Dichloroethene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,2,4-Trichlorobenzene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	51	UJ	49	UJ	42	UJ	56	UJ	47	UJ	4.4	U
VOCs	1,2-Dibromoethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,2-Dichlorobenzene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,2-Dichloroethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,2-Dichloropropane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,3-Dichlorobenzene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	1,4-Dichlorobenzene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	2-Butanone	ug/kg	250	U	250	U	210	U	280	U	240	U	22	U
VOCs	2-Hexanone	ug/kg	250	U	250	U	210	U	280	U	240	U	22	U
VOCs	4-Methyl-2-pentanone	ug/kg	250	U	250	U	210	U	280	U	240	U	22	U
VOCs	Acetic acid, methyl ester	ug/kg	200		49	U	42	U	150		47	U	4.4	U
VOCs	Acetone	ug/kg	250	U	250	U	210	U	280	U	240	U	7	J
VOCs	Benzene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Bromodichloromethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Bromoform	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Bromomethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Carbon disulfide	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Carbon tetrachloride	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Chlorobenzene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Chloroethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Chloroform	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Chloromethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Cis-1,2-Dichloroethene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Cis-1,3-Dichloropropene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Cyclohexane	ug/kg	33	J	49	U	42	U	56	U	47	U	4.4	U
VOCs	Dibromochloromethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Dichlorodifluoromethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Ethylbenzene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Isopropylbenzene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Methyl cyclohexane	ug/kg	99		49	U	42	U	56	U	47	U	4.4	U
VOCs	Methyl Tertbutyl Ether	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Methylene chloride	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-400		SS-400		SS-400		SS-401		SS-401		SS-401	
		Sample Date	10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-SS-400000		360109-SS-400005		360109-SS-400012		360109-SS-401000		360109-SS-401006		360109-SS-401011	
		Qc Code	FS		FS		FS		FS		FS		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Tetrachloroethene	ug/kg	4,300		600		62		4,400		1,900		8	U
VOCs	Toluene	ug/kg	38	J	49	U	42	U	56	U	47	U	4.4	U
VOCs	trans-1,2-Dichloroethene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	trans-1,3-Dichloropropene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Trichloroethene	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Trichlorofluoromethane	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Vinyl chloride	ug/kg	51	U	49	U	42	U	56	U	47	U	4.4	U
VOCs	Xylenes, Total	ug/kg	92	J	99	U	84	U	110	U	95	U	8.9	U
Solids	Percent Moisture	Percent	11		13		11		15		14		13	
Solids	Percent Solids	Percent	89		87		89		85		86		87	

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-402		SS-402		SS-402		SS-403		SS-403		SS-403	
		Sample Date	10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-SS-402000		360109-SS-402006		360109-SS-402011		360109-SS-403000		360109-SS-403006		360109-SS-403012	
		Qc Code	FS		FS		FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,1,2-Trichloroethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,1-Dichloroethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,1-Dichloroethene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,2,4-Trichlorobenzene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	73	UJ	45	UJ	4	U	43	UJ	44	UJ	50	UJ
VOCs	1,2-Dibromoethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,2-Dichlorobenzene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,2-Dichloroethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,2-Dichloropropane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,3-Dichlorobenzene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	1,4-Dichlorobenzene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	2-Butanone	ug/kg	370	U	230	U	20	U	220	U	220	U	250	U
VOCs	2-Hexanone	ug/kg	370	U	230	U	20	U	220	U	220	U	250	U
VOCs	4-Methyl-2-pentanone	ug/kg	370	U	230	U	20	U	220	U	220	U	250	U
VOCs	Acetic acid, methyl ester	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Acetone	ug/kg	370	U	230	U	21		220	U	220	U	250	U
VOCs	Benzene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Bromodichloromethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Bromoform	ug/kg	73	U	45	U	4	U	43	U	44	U	50	UJ
VOCs	Bromomethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Carbon disulfide	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Carbon tetrachloride	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Chlorobenzene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Chloroethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	UJ
VOCs	Chloroform	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Chloromethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Cis-1,2-Dichloroethene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Cis-1,3-Dichloropropene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Cyclohexane	ug/kg	81		45	U	4	U	43	U	44	U	50	U
VOCs	Dibromochloromethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Dichlorodifluoromethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	UJ
VOCs	Ethylbenzene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Isopropylbenzene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Methyl cyclohexane	ug/kg	260		45	U	4	U	43	U	44	U	50	U
VOCs	Methyl Tertbutyl Ether	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Methylene chloride	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-402		SS-402		SS-402		SS-403		SS-403		SS-403	
		Sample Date	10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-SS-402000		360109-SS-402006		360109-SS-402011		360109-SS-403000		360109-SS-403006		360109-SS-403012	
		Qc Code	FS		FS		FS		FS		FS		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Tetrachloroethene	ug/kg	14,000		36	J	61		630		300		15	J
VOCs	Toluene	ug/kg	39	J	45	U	4	U	43	U	44	U	50	U
VOCs	trans-1,2-Dichloroethene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	trans-1,3-Dichloropropene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Trichloroethene	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Trichlorofluoromethane	ug/kg	73	U	45	U	4	U	43	U	44	U	50	UJ
VOCs	Vinyl chloride	ug/kg	73	U	45	U	4	U	43	U	44	U	50	U
VOCs	Xylenes, Total	ug/kg	79	J	91	U	8.1	U	87	U	88	U	100	U
Solids	Percent Moisture	Percent	13		11		17		11		11		17	
Solids	Percent Solids	Percent	87		89		83		89		89		83	

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-404		SS-404		SS-404		SS-405		SS-405		SS-405	
		Sample Date	10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-SS-404000		360109-SS-404006		360109-SS-404011		360109-SS-405000		360109-SS-405008		360109-SS-405012	
		Qc Code	FS		FS		FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,1,2-Trichloroethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,1-Dichloroethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,1-Dichloroethene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,2,4-Trichlorobenzene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	70	UJ	49	UJ	46	UJ	80	U	50	UJ	44	UJ
VOCs	1,2-Dibromoethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,2-Dichlorobenzene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,2-Dichloroethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,2-Dichloropropane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,3-Dichlorobenzene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	1,4-Dichlorobenzene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	2-Butanone	ug/kg	350	U	250	U	230	U	400	U	250	U	220	U
VOCs	2-Hexanone	ug/kg	350	U	250	U	230	U	400	U	250	U	220	U
VOCs	4-Methyl-2-pentanone	ug/kg	350	U	250	U	230	U	400	U	250	U	220	U
VOCs	Acetic acid, methyl ester	ug/kg	280		49	U	46	U	80	U	50	U	44	U
VOCs	Acetone	ug/kg	350	U	250	U	230	U	400	U	250	U	220	U
VOCs	Benzene	ug/kg	36	J	49	U	46	U	80	U	50	U	44	U
VOCs	Bromodichloromethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Bromoform	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Bromomethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Carbon disulfide	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Carbon tetrachloride	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Chlorobenzene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Chloroethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Chloroform	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Chloromethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Cis-1,2-Dichloroethene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Cis-1,3-Dichloropropene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Cyclohexane	ug/kg	170		49	U	46	U	80	U	50	U	44	U
VOCs	Dibromochloromethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Dichlorodifluoromethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Ethylbenzene	ug/kg	43	J	49	U	46	U	80	U	50	U	44	U
VOCs	Isopropylbenzene	ug/kg	33	J	49	U	46	U	80	U	50	U	44	U
VOCs	Methyl cyclohexane	ug/kg	530		49	U	46	U	190		50	U	44	U
VOCs	Methyl Tertbutyl Ether	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Methylene chloride	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-404		SS-404		SS-404		SS-405		SS-405		SS-405	
		Sample Date	10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-SS-404000		360109-SS-404006		360109-SS-404011		360109-SS-405000		360109-SS-405008		360109-SS-405012	
		Qc Code	FS		FS		FS		FS		FS		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Tetrachloroethene	ug/kg	6,300		160		880		5,600		220		270	
VOCs	Toluene	ug/kg	160		49	U	46	U	23	J	50	U	44	U
VOCs	trans-1,2-Dichloroethene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	trans-1,3-Dichloropropene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Trichloroethene	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Trichlorofluoromethane	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Vinyl chloride	ug/kg	70	U	49	U	46	U	80	U	50	U	44	U
VOCs	Xylenes, Total	ug/kg	360		99	U	93	U	160	U	100	U	89	U
Solids	Percent Moisture	Percent	13		16		13		21		16		13	
Solids	Percent Solids	Percent	87		84		87		79		84		87	

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-406		SS-406		SS-406		SS-407		SS-407		SS-407	
		Sample Date	10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-SS-406000		360109-SS-406006		360109-SS-406011		360109-SS-407000		360109-SS-407006		360109-SS-407006D	
		Qc Code	FS		FS		FS		FS		FS		FD	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,1,2-Trichloroethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,1-Dichloroethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,1-Dichloroethene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,2,4-Trichlorobenzene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,2-Dibromoethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,2-Dichlorobenzene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,2-Dichloroethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,2-Dichloropropane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,3-Dichlorobenzene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	1,4-Dichlorobenzene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	2-Butanone	ug/kg	240	U	270	U	290	U	450	U	260	U	240	U
VOCs	2-Hexanone	ug/kg	240	U	270	U	290	U	450	U	260	U	240	U
VOCs	4-Methyl-2-pentanone	ug/kg	240	U	270	U	290	U	450	U	260	U	240	U
VOCs	Acetic acid, methyl ester	ug/kg	61		54	U	57	U	89	U	52	U	48	U
VOCs	Acetone	ug/kg	240	U	270	U	290	U	510		260	U	240	U
VOCs	Benzene	ug/kg	11	J	54	U	57	U	340		52	U	48	U
VOCs	Bromodichloromethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Bromoform	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Bromomethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Carbon disulfide	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Carbon tetrachloride	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Chlorobenzene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Chloroethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Chloroform	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Chloromethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Cis-1,2-Dichloroethene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Cis-1,3-Dichloropropene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Cyclohexane	ug/kg	48	U	54	U	57	U	1200		52	U	48	U
VOCs	Dibromochloromethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Dichlorodifluoromethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Ethylbenzene	ug/kg	48	U	54	U	57	U	310		52	U	48	U
VOCs	Isopropylbenzene	ug/kg	48	U	54	U	57	U	160		52	U	48	U
VOCs	Methyl cyclohexane	ug/kg	110		54	U	57	U	4100		52	U	48	U
VOCs	Methyl Tertbutyl Ether	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Methylene chloride	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-406		SS-406		SS-406		SS-407		SS-407		SS-407	
		Sample Date	10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/22/2015	
		Sample ID	360109-SS-406000		360109-SS-406006		360109-SS-406011		360109-SS-407000		360109-SS-407006		360109-SS-407006D	
		Qc Code	FS		FS		FS		FS		FS		FD	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Tetrachloroethene	ug/kg	540		380		750		1,100		52	U	48	U
VOCs	Toluene	ug/kg	48		54	U	57	U	1400		52	U	48	U
VOCs	trans-1,2-Dichloroethene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	trans-1,3-Dichloropropene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Trichloroethene	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Trichlorofluoromethane	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Vinyl chloride	ug/kg	48	U	54	U	57	U	89	U	52	U	48	U
VOCs	Xylenes, Total	ug/kg	80	J	110	U	110	U	2900		100	U	96	U
Solids	Percent Moisture	Percent	13		19		20		10		16		14	
Solids	Percent Solids	Percent	87		81		80		90		84		86	

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-407		SS-408		SS-408		SS-408		SS-506		SS-506	
		Sample Date	10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/21/2015		10/21/2015	
		Sample ID	360109-SS-407012		360109-SS-408000		360109-SS-408007		360109-SS-408011		360109-GS-506003		360109-GS-506011	
		Qc Code	FS		FS		FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	66	U	51	U	45	U	46	U	43	U	33	J
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	1,1,2-Trichloroethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	1,1-Dichloroethane	ug/kg	66	U	51	U	45	U	46	U	43	U	32	J
VOCs	1,1-Dichloroethene	ug/kg	66	U	51	U	45	U	46	U	43	U	150	J
VOCs	1,2,4-Trichlorobenzene	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	1,2-Dibromoethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	1,2-Dichlorobenzene	ug/kg	66	U	51	U	45	U	46	U	43	U	240	J
VOCs	1,2-Dichloroethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	1,2-Dichloropropane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	1,3-Dichlorobenzene	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	1,4-Dichlorobenzene	ug/kg	66	U	51	U	45	U	46	U	43	U	320	J
VOCs	2-Butanone	ug/kg	330	U	250	U	230	U	230	U	220	U	150	UJ
VOCs	2-Hexanone	ug/kg	330	U	250	U	230	U	230	U	220	U	150	UJ
VOCs	4-Methyl-2-pentanone	ug/kg	330	U	250	U	230	U	230	U	220	U	150	UJ
VOCs	Acetic acid, methyl ester	ug/kg	200		51	U	45	U	46	U	43	U	30	UJ
VOCs	Acetone	ug/kg	330	U	250	U	230	U	230	U	220	U	150	UJ
VOCs	Benzene	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Bromodichloromethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Bromoform	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Bromomethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Carbon disulfide	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Carbon tetrachloride	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Chlorobenzene	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Chloroethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Chloroform	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Chloromethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Cis-1,2-Dichloroethene	ug/kg	65	J	51	U	45	U	46	U	43	U	87000	
VOCs	Cis-1,3-Dichloropropene	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Cyclohexane	ug/kg	66	U	51	U	45	U	46	U	43	U	480	J
VOCs	Dibromochloromethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Dichlorodifluoromethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Ethylbenzene	ug/kg	66	U	51	U	45	U	46	U	43	U	8700	
VOCs	Isopropylbenzene	ug/kg	66	U	51	U	45	U	46	U	43	U	1100	J
VOCs	Methyl cyclohexane	ug/kg	66	U	27	J	45	U	46	U	43	U	2700	J
VOCs	Methyl Tertbutyl Ether	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Methylene chloride	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-407		SS-408		SS-408		SS-408		SS-506		SS-506	
		Sample Date	10/22/2015		10/22/2015		10/22/2015		10/22/2015		10/21/2015		10/21/2015	
		Sample ID	360109-SS-407012		360109-SS-408000		360109-SS-408007		360109-SS-408011		360109-GS-506003		360109-GS-506011	
		Qc Code	FS		FS		FS		FS		FS		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Tetrachloroethene	ug/kg	35	J	400		270		490		43	U	250,000	
VOCs	Toluene	ug/kg	66	U	51	U	45	U	46	U	43	U	240	J
VOCs	trans-1,2-Dichloroethene	ug/kg	66	U	51	U	45	U	46	U	43	U	240	J
VOCs	trans-1,3-Dichloropropene	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Trichloroethene	ug/kg	33	J	51	U	45	U	46	U	43	U	300000	
VOCs	Trichlorofluoromethane	ug/kg	66	U	51	U	45	U	46	U	43	U	30	UJ
VOCs	Vinyl chloride	ug/kg	66	U	51	U	45	U	46	U	43	U	1800	J
VOCs	Xylenes, Total	ug/kg	130	U	100	U	91	U	92	U	86	U	270	J
Solids	Percent Moisture	Percent	21		13		13		15		17		10	
Solids	Percent Solids	Percent	79		87		88		85		83		90	

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-506		SS-506		SS-507		SS-507		SS-507		SS-508	
		Sample Date	10/21/2015		10/21/2015		10/21/2015		10/21/2015		10/21/2015		10/21/2015	
		Sample ID	360109-GS-506011D		360109-GS-506016		360109-GS-507003		360109-GS-507009		360109-GS-507012		360109-GS-508013	
		Qc Code	FD		FS		FS		FS		FS		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	32	J	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	1,1,2-Trichloroethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	1,1-Dichloroethane	ug/kg	31	J	52	UJ	46	U	27	U	14	J	34	U
VOCs	1,1-Dichloroethene	ug/kg	130	J	52	UJ	46	U	27	U	80	J	34	U
VOCs	1,2,4-Trichlorobenzene	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	1,2-Dibromoethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	1,2-Dichlorobenzene	ug/kg	180	J	150	J	46	U	27	U	260	J	34	U
VOCs	1,2-Dichloroethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	1,2-Dichloropropane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	1,3-Dichlorobenzene	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	1,4-Dichlorobenzene	ug/kg	250	J	250	J	46	U	34		240	J	34	U
VOCs	2-Butanone	ug/kg	190	UJ	260	UJ	230	U	140	U	200	UJ	170	U
VOCs	2-Hexanone	ug/kg	190	UJ	260	UJ	230	U	140	U	200	UJ	170	U
VOCs	4-Methyl-2-pentanone	ug/kg	190	UJ	260	UJ	230	U	140	U	200	UJ	170	U
VOCs	Acetic acid, methyl ester	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Acetone	ug/kg	190	UJ	260	UJ	230	U	140	U	200	UJ	170	U
VOCs	Benzene	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Bromodichloromethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Bromoform	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Bromomethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Carbon disulfide	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Carbon tetrachloride	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Chlorobenzene	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Chloroethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Chloroform	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Chloromethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Cis-1,2-Dichloroethene	ug/kg	62000		4900	J	46	U	330		11000		14	J
VOCs	Cis-1,3-Dichloropropene	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Cyclohexane	ug/kg	540	J	520	J	46	U	27	U	41	UJ	34	U
VOCs	Dibromochloromethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Dichlorodifluoromethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Ethylbenzene	ug/kg	8000		3800	J	46	U	910		6600		34	U
VOCs	Isopropylbenzene	ug/kg	830	J	790	J	46	U	77		790	J	34	U
VOCs	Methyl cyclohexane	ug/kg	3300	J	4800	J	46	U	2100		8400		34	U
VOCs	Methyl Tertbutyl Ether	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Methylene chloride	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-89781-1 SOLID
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

		SDG	480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1		480-89781-1	
		Location	SS-506		SS-506		SS-507		SS-507		SS-507		SS-508	
		Sample Date	10/21/2015		10/21/2015		10/21/2015		10/21/2015		10/21/2015		10/21/2015	
		Sample ID	360109-GS-506011D		360109-GS-506016		360109-GS-507003		360109-GS-507009		360109-GS-507012		360109-GS-508013	
		Qc Code	FD		FS		FS		FS		FS		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Tetrachloroethene	ug/kg	330,000		390,000		180		39		41	UJ	34	U
VOCs	Toluene	ug/kg	180	J	270	J	46	U	580		2200	J	34	U
VOCs	trans-1,2-Dichloroethene	ug/kg	240	J	63	J	46	U	9.3	J	120	J	34	U
VOCs	trans-1,3-Dichloropropene	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Trichloroethene	ug/kg	250000		47000		34	J	15	J	41	UJ	34	U
VOCs	Trichlorofluoromethane	ug/kg	37	UJ	52	UJ	46	U	27	U	41	UJ	34	U
VOCs	Vinyl chloride	ug/kg	910	J	24	J	46	U	440		1800	J	15	J
VOCs	Xylenes, Total	ug/kg	97	J	890	J	92	U	880		1400	J	68	U
Solids	Percent Moisture	Percent	11		9.2		18		11		11		8.8	
Solids	Percent Solids	Percent	89		91		82		89		89		91	

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-90144-1
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

	SDG	480-90144-1		480-90144-1		480-90144-1		480-90144-1		480-90144-1	
	Location	MW-501		MW-504		MW-505		QC		QC	
	Sample Date	10/27/2015		10/27/2015		10/27/2015		10/26/2015		10/27/2015	
	Sample ID	360109-MW-50102		360109-MW-50410		360109-MW-50522		QC-TB102615-XX		QC-TB102715-XX	
	Qc Code	FS		FS		FS		TB		TB	
	Units	ug/l		ug/l		ug/l		ug/kg		ug/l	
Method Class	Parameter	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	1	U	160		910		340	U	1	U
VOCs	1,1,2,2-Tetrachloroethane	1	U	100	U	100	U	340	U	1	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	1	U	100	U	100	U	340	U	1	U
VOCs	1,1,2-Trichloroethane	1	U	100	U	100	U	340	U	1	U
VOCs	1,1-Dichloroethane	1	U	56	J	100	U	340	U	1	U
VOCs	1,1-Dichloroethene	1	U	180		460		340	U	1	U
VOCs	1,2,4-Trichlorobenzene	1	U	100	U	100	U	340	U	1	U
VOCs	1,2-Dibromo-3-chloropropane	1	U	100	U	100	U	340	U	1	U
VOCs	1,2-Dibromoethane	1	U	100	U	100	U	340	U	1	U
VOCs	1,2-Dichlorobenzene	1	U	100	U	100	U	340	U	1	U
VOCs	1,2-Dichloroethane	1	U	100	U	100	U	340	U	1	U
VOCs	1,2-Dichloropropane	1	U	100	U	100	U	340	U	1	U
VOCs	1,3-Dichlorobenzene	1	U	100	U	100	U	340	U	1	U
VOCs	1,4-Dichlorobenzene	1	U	100	U	100	U	340	U	1	U
VOCs	2-Butanone	10	U	1000	U	1000	U	1700	U	10	U
VOCs	2-Hexanone	5	U	500	U	500	U	1700	U	5	U
VOCs	4-Methyl-2-pentanone	5	U	500	U	500	U	1700	U	5	U
VOCs	Acetic acid, methyl ester	2.5	U	250	U	250	U	340	U	2.5	U
VOCs	Acetone	10	U	1000	U	1000	U	1700	U	10	U
VOCs	Benzene	1	U	100	U	100	U	340	U	1	U
VOCs	Bromodichloromethane	1	U	100	U	100	U	340	U	1	U
VOCs	Bromoform	1	U	100	U	100	U	340	U	1	U
VOCs	Bromomethane	1	U	100	U	100	U	340	U	1	U
VOCs	Carbon disulfide	1	U	100	U	100	U	340	U	1	U
VOCs	Carbon tetrachloride	1	U	100	U	100	U	340	U	1	U
VOCs	Chlorobenzene	1	U	100	U	100	U	340	U	1	U
VOCs	Chloroethane	1	U	100	U	100	U	340	U	1	U
VOCs	Chloroform	1	U	100	U	100	U	340	U	1	U
VOCs	Chloromethane	1	U	100	U	100	U	340	U	1	U
VOCs	Cis-1,2-Dichloroethene	1	U	100	U	100	U	340	U	1	U
VOCs	Cis-1,3-Dichloropropene	1	U	100	U	100	U	340	U	1	U
VOCs	Cyclohexane	1	UJ	100	U	100	U	340	U	1	U
VOCs	Dibromochloromethane	1	U	100	U	100	U	340	U	1	U
VOCs	Dichlorodifluoromethane	1	U	100	U	100	U	340	U	1	U
VOCs	Ethylbenzene	1	U	100	U	100	U	340	U	1	U
VOCs	Isopropylbenzene	1	U	100	U	100	U	340	U	1	U
VOCs	Methyl cyclohexane	1	U	100	U	100	U	340	U	1	U
VOCs	Methyl Tertbutyl Ether	1	U	100	U	100	U	340	U	1	U
VOCs	Methylene chloride	1	U	100	U	100	U	340	U	1	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-90144-1
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

	SDG	480-90144-1		480-90144-1		480-90144-1		480-90144-1	
	Location	MW-501		MW-504		MW-505		QC	
	Sample Date	10/27/2015		10/27/2015		10/27/2015		10/26/2015	
	Sample ID	360109-MW-50102		360109-MW-50410		360109-MW-50522		QC-TB102615-XX	
	Qc Code	FS		FS		FS		TB	
	Units	ug/l		ug/l		ug/l		ug/kg	
Method Class	**Parameter**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene	1	U	100	U	100	U	340	U
VOCs	Tetrachloroethene	11		100	U	100	U	340	U
VOCs	Toluene	1	U	100	U	100	U	340	U
VOCs	trans-1,2-Dichloroethene	1	U	100	U	100	U	340	U
VOCs	trans-1,3-Dichloropropene	1	U	100	U	100	U	340	U
VOCs	Trichloroethene	1	U	2400		5700		340	U
VOCs	Trichlorofluoromethane	1	U	100	U	100	U	340	U
VOCs	Vinyl chloride	1	U	100	U	100	U	340	U
VOCs	Xylenes, Total	2	U	200	U	200	U	680	U
Solids	Percent Moisture								
Solids	Percent Solids								

	SDG	480-90144-1							
	Location	QC							
	Sample Date	10/27/2015							
	Sample ID	QC-TB102715-XX							
	Qc Code	TB							
	Units	ug/l							
Method Class	**Parameter**	Result	Qualifier						
VOCs	Styrene	1	U						
VOCs	Tetrachloroethene	1	U						
VOCs	Toluene	1	U						
VOCs	trans-1,2-Dichloroethene	1	U						
VOCs	trans-1,3-Dichloropropene	1	U						
VOCs	Trichloroethene	1	U						
VOCs	Trichlorofluoromethane	1	U						
VOCs	Vinyl chloride	1	U						
VOCs	Xylenes, Total	2	U						
Solids	Percent Moisture								
Solids	Percent Solids								

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-90144-1
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

	SDG	480-90144-1		480-90144-1		480-90144-1		480-90144-1	
	Location	SS-503		SS-503		SS-503		SS-503	
	Sample Date	10/26/2015		10/26/2015		10/26/2015		10/26/2015	
	Sample ID	360109-GS-503003		360109-GS-503003		360109-GS-503006		360109-GS-503006	
	Qc Code	FS		FS		FS		FS	
	Units	Percent		ug/kg		Percent		ug/kg	
Method Class	Parameter	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane			44	U			44	U
VOCs	1,1,2,2-Tetrachloroethane			44	U			44	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane			44	U			44	U
VOCs	1,1,2-Trichloroethane			44	U			44	U
VOCs	1,1-Dichloroethane			44	U			44	U
VOCs	1,1-Dichloroethene			44	U			44	U
VOCs	1,2,4-Trichlorobenzene			44	U			44	U
VOCs	1,2-Dibromo-3-chloropropane			44	U			44	U
VOCs	1,2-Dibromoethane			44	U			44	U
VOCs	1,2-Dichlorobenzene			44	U			44	U
VOCs	1,2-Dichloroethane			44	U			44	U
VOCs	1,2-Dichloropropane			44	U			44	U
VOCs	1,3-Dichlorobenzene			44	U			44	U
VOCs	1,4-Dichlorobenzene			44	U			44	U
VOCs	2-Butanone			220	U			220	U
VOCs	2-Hexanone			220	U			220	U
VOCs	4-Methyl-2-pentanone			220	U			220	U
VOCs	Acetic acid, methyl ester			44	U			44	U
VOCs	Acetone			220	U			220	U
VOCs	Benzene			44	U			44	U
VOCs	Bromodichloromethane			44	U			44	U
VOCs	Bromoform			44	U			44	U
VOCs	Bromomethane			44	U			44	U
VOCs	Carbon disulfide			44	U			44	U
VOCs	Carbon tetrachloride			44	U			44	U
VOCs	Chlorobenzene			44	U			44	U
VOCs	Chloroethane			44	U			44	U
VOCs	Chloroform			44	U			44	U
VOCs	Chloromethane			44	U			44	U
VOCs	Cis-1,2-Dichloroethene			44	U			44	U
VOCs	Cis-1,3-Dichloropropene			44	U			44	U
VOCs	Cyclohexane			44	U			44	U
VOCs	Dibromochloromethane			44	U			44	U
VOCs	Dichlorodifluoromethane			44	U			44	U
VOCs	Ethylbenzene			44	U			44	U
VOCs	Isopropylbenzene			44	U			44	U
VOCs	Methyl cyclohexane			44	U			44	U
VOCs	Methyl Tertbutyl Ether			44	U			44	U
VOCs	Methylene chloride			44	U			44	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS - SDG 480-90144-1
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

	SDG	480-90144-1		480-90144-1		480-90144-1		480-90144-1	
	Location	SS-503		SS-503		SS-503		SS-503	
	Sample Date	10/26/2015		10/26/2015		10/26/2015		10/26/2015	
	Sample ID	360109-GS-503003		360109-GS-503003		360109-GS-503006		360109-GS-503006	
	Qc Code	FS		FS		FS		FS	
	Units	Percent		ug/kg		Percent		ug/kg	
Method Class	Parameter	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Styrene			44	U			44	U
VOCs	Tetrachloroethene			44	U			29	J
VOCs	Toluene			44	U			44	U
VOCs	trans-1,2-Dichloroethene			44	U			44	U
VOCs	trans-1,3-Dichloropropene			44	U			44	U
VOCs	Trichloroethene			44	U			44	U
VOCs	Trichlorofluoromethane			44	U			44	U
VOCs	Vinyl chloride			44	U			44	U
VOCs	Xylenes, Total			87	U			88	U
Solids	Percent Moisture	8.7				10			
Solids	Percent Solids	91				90			

NOTES:
ug/l = microgram per liter
ug/kg = microgram per kilogram
U = not detected at the reported quanitation limit
J = estimated concentration

TABLE 3 - SUMMARY OF QUALIFICATION ACTIONS
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

SDG	Analysis Method	Lab Sample Id	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Units	Lab Id
480-89582-1	SW8260C	480-89582-17	360109-PZ-3409	1,1,2-Trichloroethane	200	U	200	UJ	FD	ug/l	TALBFLO
480-89582-1	SW8260C	480-89582-18	360109-PZ-3409D	1,1,2-Trichloroethane	320		320	J	FD	ug/l	TALBFLO
480-89582-1	SW8260C	480-89582-20	360109-PZ-2216	Bromomethane	50	U *	50	UJ	MS-L, MS-RPD	ug/l	TALBFLO
480-89582-1	SW8260C	480-89582-20	360109-PZ-2216	Tetrachloroethene	5700	F1 ^	5,700	J	CCV%D, MS-H	ug/l	TALBFLO
480-89582-1	SW8260C	480-89582-5	360109-GS-501001	Chloroethane	48	U F1	48	UJ	MS-L	ug/kg	TALBFLO
480-89582-1	SW8260C	480-89582-5	360109-GS-501001	Dichlorodifluoromethane	48	U F1	48	UJ	MS-L	ug/kg	TALBFLO
480-89582-1	SW8260C	480-89582-5	360109-GS-501001	Tetrachloroethene	3300	F2 F1	3,300	J	MS-H, MS-RPD	ug/kg	TALBFLO
480-89582-1	SW8260C	480-89582-5	360109-GS-501001	Trichlorofluoromethane	48	U F1	48	UJ	MS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-15	360109-SS-407006	Tetrachloroethene	12	J	52	U	BL2	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-22	360109-SS-405008	1,2-Dibromo-3-chloropropane	50	U *	50	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-23	360109-SS-405012	1,2-Dibromo-3-chloropropane	44	U *	44	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-24	360109-SS-404000	1,2-Dibromo-3-chloropropane	70	U *	70	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-25	360109-SS-404006	1,2-Dibromo-3-chloropropane	49	U *	49	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-26	360109-SS-404011	1,2-Dibromo-3-chloropropane	46	U *	46	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-27	360109-SS-403000	1,2-Dibromo-3-chloropropane	43	U *	43	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-28	360109-SS-403006	1,2-Dibromo-3-chloropropane	44	U *	44	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-29	360109-SS-403012	1,2-Dibromo-3-chloropropane	50	U *	50	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-29	360109-SS-403012	Bromoform	50	U	50	UJ	MS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-29	360109-SS-403012	Chloroethane	50	U	50	UJ	MS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-29	360109-SS-403012	Dichlorodifluoromethane	50	U	50	UJ	MS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-29	360109-SS-403012	Tetrachloroethene	15	J F1	15	J	MS-H	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-29	360109-SS-403012	Trichlorofluoromethane	50	U	50	UJ	MS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-30	360109-SS-402000	1,2-Dibromo-3-chloropropane	73	U *	73	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-31	360109-SS-402006	1,2-Dibromo-3-chloropropane	45	U *	45	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-33	360109-SS-401000	1,2-Dibromo-3-chloropropane	56	U *	56	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-34	360109-SS-401006	1,2-Dibromo-3-chloropropane	47	U *	47	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-35	360109-SS-401011	Tetrachloroethene	8	B	8	U	BL1, BL2	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-36	360109-SS-400000	1,2-Dibromo-3-chloropropane	51	U *	51	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-37	360109-SS-400005	1,2-Dibromo-3-chloropropane	49	U *	49	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-38	360109-SS-400012	1,2-Dibromo-3-chloropropane	42	U *	42	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-39	360109-SS-301006	1,2-Dibromo-3-chloropropane	45	U *	45	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,1,1-Trichloroethane	33		33	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,1,2,2-Tetrachloroethane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,1,2-Trichloro-1,2,2-Trifluoroethane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,1,2-Trichloroethane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,1-Dichloroethane	32		32	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,1-Dichloroethene	150		150	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,2,4-Trichlorobenzene	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,2-Dibromo-3-chloropropane	30	U	30	UJ	SS-L, LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,2-Dibromoethane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,2-Dichlorobenzene	240		240	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,2-Dichloroethane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,2-Dichloropropane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,3-Dichlorobenzene	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	1,4-Dichlorobenzene	320		320	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	2-Butanone	150	U	150	UJ	SS-L	ug/kg	TALBFLO

Prepared by: BJS 11/10/2015
Checked by: JAR 11/11/2015

TABLE 3 - SUMMARY OF QUALIFICATION ACTIONS
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

SDG	Analysis Method	Lab Sample Id	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Units	Lab Id
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	2-Hexanone	150	U	150	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	4-Methyl-2-pentanone	150	U	150	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Acetic acid, methyl ester	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Acetone	150	U *	150	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Benzene	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Bromodichloromethane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Bromoform	30	U *	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Bromomethane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Carbon disulfide	30	U *	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Carbon tetrachloride	30	U *	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Chlorobenzene	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Chloroethane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Chloroform	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Chloromethane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Cis-1,3-Dichloropropene	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Cyclohexane	480		480	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Dibromochloromethane	30	U *	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Dichlorodifluoromethane	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Isopropylbenzene	1100		1,100	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Methyl cyclohexane	2700		2,700	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Methyl Tertbutyl Ether	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Methylene chloride	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Styrene	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Toluene	240		240	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	trans-1,2-Dichloroethene	240		240	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	trans-1,3-Dichloropropene	30	U	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Trichlorofluoromethane	30	U *	30	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Vinyl chloride	1800		1,800	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-4	360109-GS-506011	Xylenes, Total	270		270	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-40	360109-SS-301006D	1,2-Dibromo-3-chloropropane	52	U *	52	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-41	360109-SS-301010	1,2-Dibromo-3-chloropropane	45	U *	45	UJ	LCS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-44	360109-GW-40815	Acetone	11	* ^	11	J	CCV%D	ug/l	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,1,1-Trichloroethane	32	J	32	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,1,2,2-Tetrachloroethane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,1,2-Trichloro-1,2,2-Trifluoroethane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,1,2-Trichloroethane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,1-Dichloroethane	31	J	31	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,1-Dichloroethene	130		130	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,2,4-Trichlorobenzene	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,2-Dibromo-3-chloropropane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,2-Dibromoethane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,2-Dichlorobenzene	180		180	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,2-Dichloroethane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,2-Dichloropropane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,3-Dichlorobenzene	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	1,4-Dichlorobenzene	250		250	J	SS-L	ug/kg	TALBFLO

Prepared by: BJS 11/10/2015
Checked by: JAR 11/11/2015

TABLE 3 - SUMMARY OF QUALIFICATION ACTIONS
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

SDG	Analysis Method	Lab Sample Id	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Units	Lab Id
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	2-Butanone	190	U	190	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	2-Hexanone	190	U	190	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	4-Methyl-2-pentanone	190	U	190	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Acetic acid, methyl ester	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Acetone	190	U *	190	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Benzene	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Bromodichloromethane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Bromoform	37	U *	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Bromomethane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Carbon disulfide	37	U *	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Carbon tetrachloride	37	U *	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Chlorobenzene	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Chloroethane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Chloroform	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Chloromethane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Cis-1,3-Dichloropropene	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Cyclohexane	540		540	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Dibromochloromethane	37	U *	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Dichlorodifluoromethane	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Isopropylbenzene	830		830	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Methyl cyclohexane	3300		3,300	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Methyl Tertbutyl Ether	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Methylene chloride	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Styrene	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Toluene	180		180	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	trans-1,2-Dichloroethene	240		240	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	trans-1,3-Dichloropropene	37	U	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Trichlorofluoromethane	37	U *	37	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Vinyl chloride	910		910	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-5	360109-GS-506011D	Xylenes, Total	97		97	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,1,1-Trichloroethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,1,2,2-Tetrachloroethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,1,2-Trichloro-1,2,2-Trifluoroethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,1,2-Trichloroethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,1-Dichloroethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,1-Dichloroethene	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,2,4-Trichlorobenzene	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,2-Dibromo-3-chloropropane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,2-Dibromoethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,2-Dichlorobenzene	150		150	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,2-Dichloroethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,2-Dichloropropane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,3-Dichlorobenzene	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	1,4-Dichlorobenzene	250		250	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	2-Butanone	260	U	260	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	2-Hexanone	260	U	260	UJ	SS-L	ug/kg	TALBFLO

TABLE 3 - SUMMARY OF QUALIFICATION ACTIONS
CATEGORY A REVIEW
OCTOBER 2015 SOIL AND GROUNDWATER SAMPLING
INDUSTRIAL OVERALL UNIFORM CORPORATION
NEW ROCHELLE, NEW YORK

SDG	Analysis Method	Lab Sample Id	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Units	Lab Id
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	4-Methyl-2-pentanone	260	U	260	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Acetic acid, methyl ester	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Acetone	260	U *	260	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Benzene	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Bromodichloromethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Bromoform	52	U *	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Bromomethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Carbon disulfide	52	U *	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Carbon tetrachloride	52	U *	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Chlorobenzene	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Chloroethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Chloroform	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Chloromethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Cis-1,3-Dichloropropene	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Cyclohexane	520		520	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Dibromochloromethane	52	U *	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Dichlorodifluoromethane	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Ethylbenzene	3800		3,800	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Isopropylbenzene	790		790	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Methyl cyclohexane	4800		4,800	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Methyl Tertbutyl Ether	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Methylene chloride	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Styrene	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Toluene	270		270	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	trans-1,2-Dichloroethene	63		63	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	trans-1,3-Dichloropropene	52	U	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Trichlorofluoromethane	52	U *	52	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Vinyl chloride	24	J	24	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-6	360109-GS-506016	Xylenes, Total	890		890	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,1,1-Trichloroethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,1,2,2-Tetrachloroethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,1,2-Trichloro-1,2,2-Trifluoroethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,1,2-Trichloroethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,1-Dichloroethane	14	J	14	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,1-Dichloroethene	80		80	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,2,4-Trichlorobenzene	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,2-Dibromo-3-chloropropane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,2-Dibromoethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,2-Dichlorobenzene	260		260	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,2-Dichloroethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,2-Dichloropropane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,3-Dichlorobenzene	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	1,4-Dichlorobenzene	240		240	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	2-Butanone	200	U	200	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	2-Hexanone	200	U	200	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	4-Methyl-2-pentanone	200	U	200	UJ	SS-L	ug/kg	TALBFLO

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SDG	Analysis Method	Lab Sample Id	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Units	Lab Id
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Acetic acid, methyl ester	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Acetone	200	U *	200	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Benzene	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Bromodichloromethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Bromoform	41	U *	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Bromomethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Carbon disulfide	41	U *	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Carbon tetrachloride	41	U *	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Chlorobenzene	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Chloroethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Chloroform	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Chloromethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Cis-1,3-Dichloropropene	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Cyclohexane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Dibromochloromethane	41	U *	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Dichlorodifluoromethane	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Isopropylbenzene	790		790	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Methyl Tertbutyl Ether	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Methylene chloride	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Styrene	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Tetrachloroethene	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Toluene	2200		2,200	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	trans-1,2-Dichloroethene	120		120	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	trans-1,3-Dichloropropene	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Trichloroethene	41	U	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Trichlorofluoromethane	41	U *	41	UJ	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Vinyl chloride	1800		1,800	J	SS-L	ug/kg	TALBFLO
480-89781-1	SW8260C	480-89781-9	360109-GS-507012	Xylenes, Total	1400		1,400	J	SS-L	ug/kg	TALBFLO
480-90144-1	SW8260C	480-90144-7	360109-MW-50102	Cyclohexane	1	U	1	UJ	MS-L	ug/l	TALBFLO

Val Reason Code:
BL1 = laboratory blank qualifier
BL2 = trip/field blank qualifier
LCS-L = laboratory control sample recovery below limit
MS-L = matrix spike recovery below limit
MS-H = matrix spike recovery above limit
MS-RPD = MS/MSD relative percent difference above limit
FD = Field duplicate limit exceeded
SS-L = surrogate recovery below limit

Prepared by: BJS 11/10/2015
Checked by: JAR 11/11/2015

ATTACHMENT A

VOCs

PROJECT CATEGORY A REVIEW RECORD
Project: Industrial Overall
Method : SW-846 8260B 8260C
Laboratory and SDG(s): TAL SDG# 460-89582-1
Date: 11/6/15
Reviewer: Julie Ricardi
Review Level [X] CATEGORY A

1. ☑ **Case Narrative Review and COC/Data Package Completeness** COMMENTS
   Were problems noted? See attached
   Were all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)
   Are Field Sample IDs and Locations assigned correctly? (YES) NO (circle one)

2. ☑ **Holding time and Sample Collection**
   All samples were analyzed within the 14 day holding time. (YES) NO (circle one)

3. ☑ **QC Blanks**
   Are method blanks free of contamination? (YES) NO (circle one)
   Are Trip blanks free of contamination? YES (NO) (circle one) See attached; no quals
   Are Rinse blanks free of contamination? YES NO (NA) (circle one)

4. ☑ **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)
   Were MS/MSDs submitted/analyzed? (YES) NO
   Were all results were within the Region II limits? YES (NO) NA (circle one) See attached
   360109-PZ-2216 MS/MSD
   360109-GS-501001 MS/MSD

5. ☑ **Field Duplicates** - Region II Limits (water RPD 50, soil RPD 100)
   Were Field Duplicates submitted/analyzed? (YES) NO
   360109-PZ-3409/3409D
   Were all results were within Region II Limits? YES (NO) NA (circle one) See attached; not interpreted to be significant data limitation

6. ☑ **Reporting Limits:** Were samples analyzed at a dilution? (YES) NO (circle one)
   Actual RL reported in Table 2; samples analyzed at DLs due to high conc of 111-TCA; 1,1-DCE; PCE; TCE; cis-1,2-DCE

7. ☑ **Electronic Data Review and Edits**
   Does the EDD match the Form I's? (YES) NO (circle one)

8. ☑ **Table Review** **Table 1** (sample Listing), **Table 2** (results summary), **Table 3** (Reason Codes), **Table 4** (TICs). Did lab report TICs? YES (NO) (circle one)

9, A subset of results were qualified estimated (J/UJ) based on narrative information, but were not interpreted to be significant data limitations (ccv).

SAMPLE SUMMARY

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89582-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-89582-1	360109-GS-500003	Solid	10/17/2015 1445	10/21/2015 1000
480-89582-2	360109-GS-500007	Solid	10/17/2015 1450	10/21/2015 1000
480-89582-3	360109-GS-500008	Solid	10/17/2015 1500	10/21/2015 1000
480-89582-4	360109-DC001	Solid	10/18/2015 0830	10/21/2015 1000
480-89582-5	360109-GS-501001	Solid	10/17/2015 1645	10/21/2015 1000
480-89582-5MS	360109-GS-501001MS	Solid	10/17/2015 1645	10/21/2015 1000
480-89582-5MSD	360109-GS-501001MD	Solid	10/17/2015 1645	10/21/2015 1000
480-89582-6	360109-DC002	Solid	10/18/2015 0840	10/21/2015 1000
480-89582-7	360109-GS-502003	Solid	10/17/2015 1730	10/21/2015 1000
480-89582-8	360109-DC003	Solid	10/18/2015 1100	10/21/2015 1000
480-89582-9	360109-DC004	Solid	10/18/2015 1115	10/21/2015 1000
480-89582-10	360109-GS-504001	Solid	10/18/2015 0845	10/21/2015 1000
480-89582-11	360109-GS-504005	Solid	10/18/2015 0850	10/21/2015 1000
480-89582-12	360109-GS-504008	Solid	10/18/2015 0900	10/21/2015 1000
480-89582-13	360109-GS-505003	Solid	10/18/2015 1255	10/21/2015 1000
480-89582-14	360109-GS-505009	Solid	10/18/2015 1305	10/21/2015 1000
480-89582-15	360109-GS-505012	Solid	10/18/2015 1325	10/21/2015 1000
480-89582-16	360109-PZ-3315	Water	10/18/2015 1140	10/21/2015 1000
480-89582-17	360109-PZ-3409	Water	10/17/2015 1730	10/21/2015 1000
480-89582-18	360109-PZ-3409D	Water	10/17/2015 1730	10/21/2015 1000
480-89582-19	360109-PZ-3527	Water	10/17/2015 1720	10/21/2015 1000
480-89582-20	360109-PZ-2216	Water	10/18/2015 1405	10/21/2015 1000
480-89582-21	QC-TB10172015-XX	Solid	10/17/2015 1200	10/21/2015 1000
480-89582-22	QC-TB10172015-XX	Water	10/17/2015 1550	10/21/2015 1000

Case Narrative

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Industrial Overall Service site

TestAmerica Job ID: 480-89582-1

Job ID: 480-89582-1

Laboratory: TestAmerica Buffalo

4

Narrative

Job Narrative
480-89582-1

Comments
No additional comments.

Receipt
The samples were received on 10/21/2015 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9° C.

Receipt Exceptions

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): QC-TB10172015-XX (480-89582-22) ✓

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271226 recovered above the upper control limit for Carbon Disulfide. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 360109-GS-500003 (480-89582-1), 360109-GS-500007 (480-89582-2), 360109-GS-500008 (480-89582-3), 360109-GS-501001 (480-89582-5), 360109-GS-502003 (480-89582-7), 360109-GS-504001 (480-89582-10), 360109-GS-504005 (480-89582-11), 360109-GS-504008 (480-89582-12), 360109-GS-505003 (480-89582-13), 360109-GS-505009 (480-89582-14), 360109-GS-505012 (480-89582-15) and QC-TB10172015-XX (480-89582-21) OK

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271226 recovered outside acceptance criteria, low biased, for Vinyl Chloride. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples are impacted: 360109-GS-500003 (480-89582-1), 360109-GS-500007 (480-89582-2), 360109-GS-500008 (480-89582-3), 360109-GS-501001 (480-89582-5), 360109-GS-502003 (480-89582-7), 360109-GS-504001 (480-89582-10), 360109-GS-504005 (480-89582-11), 360109-GS-504008 (480-89582-12), 360109-GS-505003 (480-89582-13), 360109-GS-505009 (480-89582-14), 360109-GS-505012 (480-89582-15) and QC-TB10172015-XX (480-89582-21) OK

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271541 recovered above the upper control limit for 1,1,2-Trichloro-1,2,2-trifluoroethene and Methylcyclohexane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 360109-PZ-3315 (480-89582-16), 360109-PZ-3409 (480-89582-17), 360109-PZ-3409D (480-89582-18), 360109-PZ-3527 (480-89582-19), 360109-PZ-2216 (480-89582-20) and QC-TB10172015-XX (480-89582-22) OK

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-271541 recovered outside control limits for the following analyte: Bromomethane. Bromomethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-analysis was not performed. The following sample is impacted: 360109-PZ-3315 (480-89582-16), 360109-PZ-3409 (480-89582-17), 360109-PZ-3409D (480-89582-18), 360109-PZ-3527 (480-89582-19), 360109-PZ-2216 (480-89582-20) and QC-TB10172015-XX (480-89582-22) not primary site contaminant; OK

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: 360109-PZ-3315 (480-89582-16), 360109-PZ-3409 (480-89582-17), 360109-PZ-3409D (480-89582-18), 360109-PZ-3527 (480-89582-19) and 360109-PZ-2216 (480-89582-20). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 480-271708 was outside the method criteria for the following analyte: Tetrachloroethene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated. The following sample is impacted: 360109-PZ-2216 (480-89582-20). ✓ (J)UJ (not interpreted to be a significant data limitation)

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-271708 recovered outside control limits for the following analyte: Bromomethane. Bromomethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-analysis was not performed. The following samples are impacted: 360109-PZ-2216 (480-89582-20) not primary site contaminant; OK

Job ID: 480-89582-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: 360109-PZ-2216 (480-89582-20), (480-89582-B-20 MS) and (480-89582-B-20 MSD). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The continuing calibration verification (CCV) associated with analytical batch 271708 recovered above the upper control limit for the analyte Methylcyclohexane. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following sample is impacted: 360109-PZ-2216 (480-89582-20). OK

Method(s) 8260C: The continuing calibration verification (CCV) associated with analytical batch 271708 recovered outside acceptance criteria, low biased, for the analyte Bromomethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. OK

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

not primary site contaminants

Phillis

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89582-1

Client Sample ID: QC-TB10172015-XX

water TB

Lab Sample ID: 480-89582-22
Client Matrix: Water

Date Sampled: 10/17/2015 1550
Date Received: 10/21/2015 1000

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-271541	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S3983.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2015 1436			Final Weight/Volume:	5 mL
Prep Date:	10/28/2015 1436				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Butanone (MEK)	ND		1.3	10
2-Hexanone	ND		1.2	5.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND	*	0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		1.3	2.5
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	0.61	J	0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

All samples ND; no qual

JF 11/9/15

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89582-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-271708

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-89582-20	Analysis Batch:	480-271708	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S4018.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/29/2015 0447			Final Weight/Volume:	5 mL
Prep Date:	10/29/2015 0447				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	480-89582-20	Analysis Batch:	480-271708	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S4019.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/29/2015 0510			Final Weight/Volume:	5 mL
Prep Date:	10/29/2015 0510				5 mL
Leach Date:	N/A				

MS/MSD 70-130 / 20

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	109	110	73 - 126	1	15		
1,1,2,2-Tetrachloroethane	102	105	70 - 126	3	15		
1,1,2-Trichloro-1,2,2-trifluoroethane	111	123	52 - 148	10	20		
1,1,2-Trichloroethane	109	116	76 - 122	6	15		
1,1-Dichloroethane	109	112	71 - 129	3	20		
1,1-Dichloroethene	110	116	58 - 121	5	16		
1,2,4-Trichlorobenzene	105	111	70 - 122	6	20		
1,2-Dibromo-3-Chloropropane	84	85	56 - 134	2	15		
1,2-Dibromoethane	104	110	77 - 120	5	15		
1,2-Dichlorobenzene	107	107	80 - 124	0	20		
1,2-Dichloroethane	102	104	75 - 127	1	20		
1,2-Dichloropropane	110	109	76 - 120	1	20		
1,3-Dichlorobenzene	110	107	77 - 120	2	20		
1,4-Dichlorobenzene	107	109	75 - 120	2	20		
2-Butanone (MEK)	103	109	57 - 140	5	20		
2-Hexanone	101	106	65 - 127	5	15		
4-Methyl-2-pentanone (MIBK)	97	105	71 - 125	8	35		
Acetone	101	112	56 - 142	11	15		
Benzene	111	111	71 - 124	0	13		
Bromodichloromethane	100	101	80 - 122	1	15		
Bromoform	72	76	52 - 132	6	15		
Bromomethane JUJ -20 MS-L MS-RPD	42	57	55 - 144	29	15	F1	F2
Carbon disulfide	93	98	59 - 134	5	15		
Carbon tetrachloride	113	114	72 - 134	0	15		
Chlorobenzene	113	115	72 - 120	2	25		
Chloroethane	83	85	69 - 136	2	15		
Chloroform	111	110	73 - 127	1	20		
Chloromethane	91	93	68 - 124	2	15		
cis-1,2-Dichloroethene	107	106	74 - 124	0	15		
cis-1,3-Dichloropropene	100	101	74 - 124	1	15		
Cyclohexane	117	116	59 - 135	1	20		
Dibromochloromethane	85	90	75 - 125	6	15		
Dichlorodifluoromethane	83	82	59 - 135	2	20		

JM 11/9/15

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89582-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-271708

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-89582-20	Analysis Batch:	480-271708	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S4018.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/29/2015 0447			Final Weight/Volume:	5 mL
Prep Date:	10/29/2015 0447				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	480-89582-20	Analysis Batch:	480-271708	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S4019.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/29/2015 0510			Final Weight/Volume:	5 mL
Prep Date:	10/29/2015 0510				5 mL
Leach Date:	N/A				

70-130 / 20

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ethylbenzene	110	111	77 - 123	1	15		
Isopropylbenzene	109	106	77 - 122	3	20		
Methyl acetate	108	115	74 - 133	6	20		
Methyl tert-butyl ether	99	103	64 - 127	5	37		
Methylcyclohexane	120	116	61 - 138	3	20		
Methylene Chloride	101	105	57 - 132	4	15		
Styrene	108	112	70 - 130	3	20		
Tetrachloroethene (J+ - 20)	131	136	74 - 122	1	20	F1	F1
Toluene	109	111	80 - 122	2	15		
trans-1,2-Dichloroethene MS-H	112	110	73 - 127	2	20		
trans-1,3-Dichloropropene	90	99	72 - 123	10	15		
Trichloroethene	112	110	74 - 123	1	16		
Trichlorofluoromethane	99	94	62 - 152	5	20		
Vinyl chloride	89	96	65 - 133	7	15		
Xylenes, Total	112	114	76 - 122	2	16		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99	106	66 - 137
Toluene-d8 (Surr)	105	109	71 - 126
4-Bromofluorobenzene (Surr)	103	107	73 - 120

11/9/15

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89582-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-271176

Method: 8260C
Preparation: 5035

MS Lab Sample ID: 480-89582-5
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 10/27/2015 0548
Prep Date: 10/21/2015 1800
Leach Date: N/A

Analysis Batch: 480-271226
Prep Batch: 480-271176
Leach Batch: N/A

Instrument ID: HP5973G
Lab File ID: G44197.D
Initial Weight/Volume: 5.664 g
Final Weight/Volume: 5 mL
5 mL

MSD Lab Sample ID: 480-89582-5
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 10/27/2015 0610
Prep Date: 10/21/2015 1800
Leach Date: N/A

Analysis Batch: 480-271226
Prep Batch: 480-271176
Leach Batch: N/A

Instrument ID: HP5973G
Lab File ID: G44198.D
Initial Weight/Volume: 4.86 g
Final Weight/Volume: 5 mL
5 mL

MS/MSD 70-130/35

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane J+ ND - 5	123	132	64 - 116	22	20	F1	F1 F2
1,1,2,2-Tetrachloroethane	118	120	75 - 120	17	20		
1,1,2-Trichloroethane	126	129	70 - 130	18	20		
1,1,2-Trichloro-1,2,2-trifluoroethane	101	108	40 - 120	22	20		F2
1,1-Dichloroethane	122	126	82 - 138	19	20		
1,1-Dichloroethene	115	121	50 - 147	20	20		
1,2,4-Trichlorobenzene J+ ND - 5	130	139	40 - 160	22	20		F2
1,2-Dibromo-3-Chloropropane	80	86	60 - 110	22	20		F2
1,2-Dibromoethane	127	130	81 - 119	18	20	F1	F1
1,2-Dichlorobenzene J+ ND - 5	127	132	80 - 132	19	20		
1,2-Dichloroethane	119	120	78 - 129	17	20		
1,2-Dichloropropane J+ ↓ - 5	128	133	76 - 125	19	20	F1	F1
1,3-Dichlorobenzene J+ ↓ - 5	129	134	63 - 134	19	20		
1,4-Dichlorobenzene	125	130	60 - 134	19	20		
2-Hexanone	116	117	70 - 127	16	20		
2-Butanone (MEK)	122	120	54 - 149	14	20		
4-Methyl-2-pentanone (MIBK)	119	119	74 - 120	15	20		
Acetone	117	111	47 - 141	10	20		
Benzene J+ ND - 5	126	132	77 - 125	20	20	F1	F1
Bromodichloromethane	111	120	71 - 121	23	20		F2
Bromoform	97	106	48 - 125	23	20		F2
Bromomethane	80	81	39 - 149	17	20		
Carbon disulfide J+ ND - 5	139	148	40 - 136	22	20	F1	F1 F2
Carbon tetrachloride	117	129	54 - 135	25	20		F2
Chlorobenzene J+ ND - 5	131	136	76 - 126	19	20	F1	F1
Dibromochloromethane	106	116	64 - 118	24	20		F2
Chloroethane J UJ - 5 MS-L	46	45	23 - 164	13	20		
Chloroform	119	124	78 - 118	19	20	F1	F1
Chloromethane	114	112	61 - 124	14	20		
cis-1,2-Dichloroethene	125	129	79 - 124	18	20	F1	F1
cis-1,3-Dichloropropene	124	128	75 - 121	19	20	F1	F1
Cyclohexane	117	124	49 - 129	20	20		
Dichlorodifluoromethane J UJ - 5 MS-L	45	42	10 - 150	9	20		

11/9/15

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89582-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-271176

Method: 8260C
Preparation: 5035

MS Lab Sample ID:	480-89582-5	Analysis Batch:	480-271226	Instrument ID:	HP5973G
Client Matrix:	Solid	Prep Batch:	480-271176	Lab File ID:	G44197.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.664 g
Analysis Date:	10/27/2015 0548			Final Weight/Volume:	5 mL
Prep Date:	10/21/2015 1800				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	480-89582-5	Analysis Batch:	480-271226	Instrument ID:	HP5973G
Client Matrix:	Solid	Prep Batch:	480-271176	Lab File ID:	G44198.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	4.86 g
Analysis Date:	10/27/2015 0610			Final Weight/Volume:	5 mL
Prep Date:	10/21/2015 1800				5 mL
Leach Date:	N/A				

70-130/35

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ethylbenzene J+ (ND) -5	128	133	78 - 124	19	20	F1	F1
Isopropylbenzene	124	130	76 - 119	20	20	F1	F1
Methyl acetate	117	115	71 - 123	14	20		
Methyl tert-butyl ether	121	122	67 - 137	16	20		
Methylcyclohexane	126	136	50 - 130	24	20		F1 F2
Methylene Chloride J+ (ND) -5	133	135	75 - 118	17	20	F1	F1
Styrene J+ (ND) -5	133	138	84 - 119	20	20	F1	F1
Tetrachloroethene J+/UJ -5 MS H MS RPD	-24	177	73 - 133	65	20	F1	F1 F2
Toluene MS-H, MS-RPD	121	128	75 - 124	21	20		F1 F2
trans-1,2-Dichloroethene J+ (ND) -5	125	132	74 - 129	21	20		F1 F2
trans-1,3-Dichloropropene	121	126	73 - 118	19	20	F1	F1
Trichloroethene J+ (ND) -5	129	136	75 - 131	21	20		F1 F2
Trichlorofluoromethane J (UJ) -5	74	56	29 - 158	12	20		
Vinyl chloride MS-L	97	99	59 - 124	17	20		
Xylenes, Total J+ (ND) -5	132	138	78 - 125	20	20	F1	F1

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93	94	53 - 146
Toluene-d8 (Surr)	97	101	50 - 149
4-Bromofluorobenzene (Surr)	105	110	49 - 148

JR 11/9/15

Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Industrial Overall Service site

TestAmerica Job ID: 480-89582-1

Client Sample ID: 360109-PZ-3409
Date Collected: 10/17/15 17:30
Date Received: 10/21/15 10:00

PZ-3409D

Lab Sample ID: 480-89582-17
Matrix: Water

5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		200	160	ug/L			10/28/15 15:22	200
1,1,2,2-Tetrachloroethane	ND		200	42	ug/L			10/28/15 15:22	200
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		200	62	ug/L			10/28/15 15:22	200
1,1,2-Trichloroethane (J|U5)	ND	320 ug/L	200	46	ug/L			10/28/15 15:22	200
1,1-Dichloroethane	ND		200	76	ug/L			10/28/15 15:22	200
1,1-Dichloroethene	ND		200	58	ug/L			10/28/15 15:22	200
1,2,4-Trichlorobenzene	ND		200	82	ug/L			10/28/15 15:22	200
1,2-Dibromo-3-Chloropropane	ND		200	78	ug/L			10/28/15 15:22	200
1,2-Dibromoethane	ND		200	150	ug/L			10/28/15 15:22	200
1,2-Dichlorobenzene	ND		200	160	ug/L			10/28/15 15:22	200
1,2-Dichloroethane	ND		200	42	ug/L			10/28/15 15:22	200
1,2-Dichloropropane	ND		200	140	ug/L			10/28/15 15:22	200
1,3-Dichlorobenzene	ND		200	160	ug/L			10/28/15 15:22	200
1,4-Dichlorobenzene	ND		200	170	ug/L			10/28/15 15:22	200
2-Butanone (MEK)	ND		2000	260	ug/L			10/28/15 15:22	200
2-Hexanone	ND		1000	250	ug/L			10/28/15 15:22	200
4-Methyl-2-pentanone (MIBK)	ND		1000	420	ug/L			10/28/15 15:22	200
Acetone	ND		2000	600	ug/L			10/28/15 15:22	200
Benzene	ND		200	82	ug/L			10/28/15 15:22	200
Bromodichloromethane	ND		200	78	ug/L			10/28/15 15:22	200
Bromoform	ND		200	52	ug/L			10/28/15 15:22	200
Bromomethane	ND	*	200	140	ug/L			10/28/15 15:22	200
Carbon disulfide	ND		200	38	ug/L			10/28/15 15:22	200
Carbon tetrachloride	ND		200	54	ug/L			10/28/15 15:22	200
Chlorobenzene	ND		200	150	ug/L			10/28/15 15:22	200
Chloroethane	ND		200	64	ug/L			10/28/15 15:22	200
Chloroform	ND		200	68	ug/L			10/28/15 15:22	200
Chloromethane	ND		200	70	ug/L			10/28/15 15:22	200
cis-1,2-Dichloroethene (See DL)	~~28000~~ E		200	160	ug/L			10/28/15 15:22	200
cis-1,3-Dichloropropene	ND		200	72	ug/L			10/28/15 15:22	200
Cyclohexane	ND		200	36	ug/L			10/28/15 15:22	200
Dibromochloromethane	ND		200	64	ug/L			10/28/15 15:22	200
Dichlorodifluoromethane	ND		200	140	ug/L			10/28/15 15:22	200
Ethylbenzene	ND		200	150	ug/L			10/28/15 15:22	200
Isopropylbenzene	ND		200	160	ug/L			10/28/15 15:22	200
Methyl acetate	ND		500	260	ug/L			10/28/15 15:22	200
Methyl tert-butyl ether	ND		200	32	ug/L			10/28/15 15:22	200
Methylcyclohexane	ND		200	32	ug/L			10/28/15 15:22	200
Methylene Chloride	ND		200	88	ug/L			10/28/15 15:22	200
Styrene	ND		200	150	ug/L			10/28/15 15:22	200
Tetrachloroethene (See DL)	~~25000~~ E	16000	200	72	ug/L			10/28/15 15:22	200
Toluene	ND		200	100	ug/L			10/28/15 15:22	200
trans-1,2-Dichloroethene	ND		200	180	ug/L			10/28/15 15:22	200
trans-1,3-Dichloropropene	ND		200	74	ug/L			10/28/15 15:22	200
Trichloroethene OK	13000	12000	200	92	ug/L			10/28/15 15:22	200
Trichlorofluoromethane	ND		200	180	ug/L			10/28/15 15:22	200
Vinyl chloride OK	1600	1500	200	180	ug/L			10/28/15 15:22	200
Xylenes, Total	ND		400	130	ug/L			10/28/15 15:22	200

JW 11/9/15

Client Sample ID: 360109-PZ-3409
Date Collected: 10/17/15 17:30
Date Received: 10/21/15 10:00

PZ-3409D

Lab Sample ID: 480-89582-17
Matrix: Water

5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		66 - 137		10/28/15 15:22	200
4-Bromofluorobenzene (Surr)	101		73 - 120		10/28/15 15:22	200
Toluene-d8 (Surr)	104		71 - 126		10/28/15 15:22	200

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		400	330	ug/L			10/28/15 16:54	400
1,1,2,2-Tetrachloroethane	ND		400	84	ug/L			10/28/15 16:54	400
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		400	120	ug/L			10/28/15 16:54	400
1,1,2-Trichloroethane	ND		400	92	ug/L			10/28/15 16:54	400
1,1-Dichloroethane	ND		400	150	ug/L			10/28/15 16:54	400
1,1-Dichloroethene	ND		400	120	ug/L			10/28/15 16:54	400
1,2,4-Trichlorobenzene	ND		400	160	ug/L			10/28/15 16:54	400
1,2-Dibromo-3-Chloropropane	ND		400	160	ug/L			10/28/15 16:54	400
1,2-Dibromoethane	ND		400	290	ug/L			10/28/15 16:54	400
1,2-Dichlorobenzene	ND		400	320	ug/L			10/28/15 16:54	400
1,2-Dichloroethane	ND		400	84	ug/L			10/28/15 16:54	400
1,2-Dichloropropane	ND		400	290	ug/L			10/28/15 16:54	400
1,3-Dichlorobenzene	ND		400	310	ug/L			10/28/15 16:54	400
1,4-Dichlorobenzene	ND		400	340	ug/L			10/28/15 16:54	400
2-Butanone (MEK)	ND		4000	530	ug/L			10/28/15 16:54	400
2-Hexanone	ND		2000	500	ug/L			10/28/15 16:54	400
4-Methyl-2-pentanone (MIBK)	ND		2000	840	ug/L			10/28/15 16:54	400
Acetone	ND		4000	1200	ug/L			10/28/15 16:54	400
Benzene	ND		400	160	ug/L			10/28/15 16:54	400
Bromodichloromethane	ND		400	160	ug/L			10/28/15 16:54	400
Bromoform	ND		400	100	ug/L			10/28/15 16:54	400
Bromomethane	ND	*	400	280	ug/L			10/28/15 16:54	400
Carbon disulfide	ND		400	76	ug/L			10/28/15 16:54	400
Carbon tetrachloride	ND		400	110	ug/L			10/28/15 16:54	400
Chlorobenzene	ND		400	300	ug/L			10/28/15 16:54	400
Chloroethane	ND		400	130	ug/L			10/28/15 16:54	400
Chloroform	ND		400	140	ug/L			10/28/15 16:54	400
Chloromethane	ND		400	140	ug/L			10/28/15 16:54	400
cis-1,2-Dichloroethene OK	27000		400	320	ug/L			10/28/15 16:54	400
cis-1,3-Dichloropropene	ND		400	140	ug/L			10/28/15 16:54	400
Cyclohexane	ND		400	72	ug/L			10/28/15 16:54	400
Dibromochloromethane	ND		400	130	ug/L			10/28/15 16:54	400
Dichlorodifluoromethane	ND		400	270	ug/L			10/28/15 16:54	400
Ethylbenzene	ND		400	300	ug/L			10/28/15 16:54	400
Isopropylbenzene	ND		400	320	ug/L			10/28/15 16:54	400
Methyl acetate	ND		1000	520	ug/L			10/28/15 16:54	400
Methyl tert-butyl ether	ND		400	64	ug/L			10/28/15 16:54	400
Methylcyclohexane	ND		400	64	ug/L			10/28/15 16:54	400
Methylene Chloride	ND		400	180	ug/L			10/28/15 16:54	400
Styrene	ND		400	290	ug/L			10/28/15 16:54	400
Tetrachloroethene OK	17000		400	140	ug/L			10/28/15 16:54	400
Toluene	ND		400	200	ug/L			10/28/15 16:54	400
trans-1,2-Dichloroethene	ND		400	360	ug/L			10/28/15 16:54	400
trans-1,3-Dichloropropene	ND		400	150	ug/L			10/28/15 16:54	400

25000

16000

JR 11/9/15

Client Sample ID: 360109-PZ-3409
Date Collected: 10/17/15 17:30
Date Received: 10/21/15 10:00

Lab Sample ID: 480-89582-17
Matrix: Water

5

Method: 8260C - Volatile Organic Compounds by GC/MS - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	See orig. ~~41000~~		400	180	ug/L			10/28/15 16:54	400
Trichlorofluoromethane	ND		400	350	ug/L			10/28/15 16:54	400
Vinyl chloride	See orig. ~~1700~~		400	360	ug/L			10/28/15 16:54	400
Xylenes, Total	ND		800	260	ug/L			10/28/15 16:54	400

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*10/28/15 16:54*	*400*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*10/28/15 16:54*	*400*
Toluene-d8 (Surr)	*103*		*71 - 126*		*10/28/15 16:54*	*400*

JR
11/9/15

Checked for completeness of parameters requested. JF 11/9/15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 480-89582-1

Job Description: Industrial Overall Service site

For:
AMEC Foster Wheeler E & I, Inc
511 Congress St. Suite 200
Portland, ME 04101

Attention: Ms. Julie Ricardi

Approved for release.
Brian J Fischer
Manager of Project Management
10/30/2015 4:20 PM

Brian J Fischer, Manager of Project Management
10 Hazelwood Drive, Amherst, NY, 14228-2298
(716)504-9835
brian.fischer@testamericainc.com
10/30/2015

cc: Mr. Tige Cunningham

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report. TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NHDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

VOCs

PROJECT CATEGORY A REVIEW RECORD
Project: Industrial Overall
Method : SW-846 8260B 8260C
Laboratory and SDG(s): TAL SDG# 480-89781-1
Date: 11/6/15
Reviewer: Julie Ricerdi
Review Level [X] CATEGORY A

1. ☑ **Case Narrative Review and COC/Data Package Completeness** COMMENTS
   Were problems noted? See attached
   Were all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)
   Are Field Sample IDs and Locations assigned correctly? YES (NO) (circle one)
   See attached IDs changed in TEDs during Cat A review
2. ☑ **Holding time and Sample Collection**
   All samples were analyzed within the 14 day holding time. (YES) NO (circle one)
3. ☑ **QC Blanks**
   Are method blanks free of contamination? YES (NO) (circle one) See attached for quals
   Are Trip blanks free of contamination? YES (NO) (circle one) See attached for quals
   Are Rinse blanks free of contamination? YES NO (NA) (circle one)
   iNote: TB was qualified H for holding time by lab; H quals removed based on prof. judgment.
4. ☑ **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)
   Were MS/MSDs submitted/analyzed? (YES) NO
   360109-SS-403012 MS/MSD
   Were all results were within the Region II limits? YES (NO) NA (circle one)
   See attached for quals
5. ☑ **Field Duplicates** - Region II Limits (water RPD 50, soil RPD 100)
   Were Field Duplicates submitted/analyzed? (YES) NO
   See attached sample list; all OK
   Were all results were within Region II Limits? (YES) NO NA (circle one)
6. ☑ **Reporting Limits:** Were samples analyzed at a dilution? YES NO (circle one)
7. ☑ **Electronic Data Review and Edits**
   Does the EDD match the Form I's? (YES) NO (circle one)
8. ☑ **Table Review** **Table 1** (sample Listing), **Table 2** (results summary), **Table 3** (Reason Codes), **Table 4** (TICs). Did lab report TICs? YES (NO) (circle one)

9. Surrogate recoveries – Percent recoveries for 2 or more surrogates in a subset of samples were below Reg 2 control limits & based on professional judgment sample result were qualified (J/UJ). See attached summary.
10. Subset of compound results were qualified estimated (J/UJ) based on narrative information but were not interpreted to be significant data limitations. (CCV, LCS)

SAMPLE SUMMARY

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89781-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-89781-1	QC-TB10202015-XX	Solid	10/20/2015 1600	10/24/2015 0220
480-89781-2	360109-MH001010	Solid	10/20/2015 1615	10/24/2015 0220
480-89781-3	360109-GS506003	Solid	10/21/2015 0800	10/24/2015 0220
480-89781-4	360109-GS506011] OK	Solid	10/21/2015 0830	10/24/2015 0220
480-89781-5	360109-GS506011D	Solid	10/21/2015 0830	10/24/2015 0220
480-89781-6	360109-GS506016	Solid	10/21/2015 0845	10/24/2015 0220
480-89781-7	360109-GS507003	Solid	10/21/2015 0955	10/24/2015 0220
480-89781-8	360109-GS507009	Solid	10/21/2015 1000	10/24/2015 0220
480-89781-9	360109-GS507012	Solid	10/21/2015 1015	10/24/2015 0220
480-89781-10	360109-GS508013	Solid	10/21/2015 1055	10/24/2015 0220
480-89781-11	360109-SS-408000	Solid	10/22/2015 0850	10/24/2015 0220
480-89781-12	360109-SS-408007	Solid	10/22/2015 0855	10/24/2015 0220
480-89781-13	360109-SS-408011	Solid	10/22/2015 0915	10/24/2015 0220
480-89781-14	360109-SS-407000	Solid	10/22/2015 0925	10/24/2015 0220
480-89781-15	360109-SS-407006] OK	Solid	10/22/2015 0935	10/24/2015 0220
480-89781-16	360109-SS-407006D	Solid	10/22/2015 0935	10/24/2015 0220
480-89781-17	360109-SS-407012	Solid	10/22/2015 0945	10/24/2015 0220
480-89781-18	360109-SS-406000	Solid	10/22/2015 0955	10/24/2015 0220
480-89781-19	360109-SS-406006	Solid	10/22/2015 1000	10/24/2015 0220
480-89781-20	360109-SS-406011	Solid	10/22/2015 1010	10/24/2015 0220
480-89781-21	360109-SS-405000	Solid	10/22/2015 1025	10/24/2015 0220
480-89781-22	360109-SS-405008	Solid	10/22/2015 1030	10/24/2015 0220
480-89781-23	360109-SS-405012	Solid	10/22/2015 1035	10/24/2015 0220
480-89781-24	360109-SS-404000	Solid	10/22/2015 1045	10/24/2015 0220
480-89781-25	360109-SS-404006	Solid	10/22/2015 1050	10/24/2015 0220
480-89781-26	360109-SS-404011	Solid	10/22/2015 1055	10/24/2015 0220
480-89781-27	360109-SS-403000	Solid	10/22/2015 1110	10/24/2015 0220
480-89781-28	360109-SS-403006	Solid	10/22/2015 1115	10/24/2015 0220
480-89781-29	360109-SS-403012	Solid	10/22/2015 1120	10/24/2015 0220
480-89781-29MS	360109-SS-403012MS	Solid	10/22/2015 1120	10/24/2015 0220
480-89781-29MSD	360109-SS-403012MD	Solid	10/22/2015 1120	10/24/2015 0220
480-89781-30	360109-SS-402000	Solid	10/22/2015 1135	10/24/2015 0220
480-89781-31	360109-SS-402006	Solid	10/22/2015 1140	10/24/2015 0220
480-89781-32	360109-SS-402011	Solid	10/22/2015 1145	10/24/2015 0220
480-89781-33	360109-SS-401000	Solid	10/22/2015 1200	10/24/2015 0220
480-89781-34	360109-SS-401006	Solid	10/22/2015 1205	10/24/2015 0220
480-89781-35	360109-SS-401011	Solid	10/22/2015 1210	10/24/2015 0220
480-89781-36	360109-SS-400000	Solid	10/22/2015 1218	10/24/2015 0220
480-89781-37	360109-SS-400005	Solid	10/22/2015 1221	10/24/2015 0220
480-89781-38	360109-SS-400012	Solid	10/22/2015 1225	10/24/2015 0220
480-89781-39	360109-SS-301006] OK	Solid	10/22/2015 1240	10/24/2015 0220
480-89781-40	360109-SS-301006D	Solid	10/22/2015 1240	10/24/2015 0220
480-89781-41	360109-SS-301010	Solid	10/22/2015 1242	10/24/2015 0220
480-89781-42	360109-SS-301012	Solid	10/22/2015 1245	10/24/2015 0220
480-89781-43	360109-GW-30114	Water	10/22/2015 1430	10/24/2015 0220
480-89781-44	360109-GW-40815	Water	10/22/2015 1515	10/24/2015 0220
480-89781-45	QC-TB102215-XX ND	Water	10/22/2015 1600	10/24/2015 0220

11/9/15

Sample Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Industrial Overall Service site

TestAmerica Job ID: 480-89781-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-89781-1	QC-TB10202015-XX	Solid	10/20/15 16:00	10/24/15 02:20
480-89781-2	360109-MH001010	Solid	10/20/15 16:15	10/24/15 02:20
480-89781-3	360109-US506003	Solid	10/21/15 08:00	10/24/15 02:20
480-89781-4	360109-US506011	Solid	10/21/15 08:30	10/24/15 02:20
480-89781-5	360109-US506011D	Solid	10/21/15 08:30	10/24/15 02:20
480-89781-6	360109-US5061016	Solid	10/21/15 08:45	10/24/15 02:20
480-89781-7	360109-US507003	Solid	10/21/15 09:55	10/24/15 02:20
480-89781-8	360109-US507009	Solid	10/21/15 10:00	10/24/15 02:20
480-89781-9	360109-US507012	Solid	10/21/15 10:15	10/24/15 02:20
480-89781-10	360109-US508013	Solid	10/21/15 10:55	10/24/15 02:20
480-89781-11	360109-SS-408000	Solid	10/22/15 08:50	10/24/15 02:20
480-89781-12	360109-SS-408007	Solid	10/22/15 08:55	10/24/15 02:20
480-89781-13	360109-SS-408011	Solid	10/22/15 09:15	10/24/15 02:20
480-89781-14	360109-SS-407000	Solid	10/22/15 09:25	10/24/15 02:20
480-89781-15	360109-SS-407006	Solid	10/22/15 09:35	10/24/15 02:20
480-89781-16	360109-SS-407006D	Solid	10/22/15 09:35	10/24/15 02:20
480-89781-17	360109-SS-407012	Solid	10/22/15 09:45	10/24/15 02:20
480-89781-18	360109-SS-406000	Solid	10/22/15 09:55	10/24/15 02:20
480-89781-19	360109-SS-406006	Solid	10/22/15 10:00	10/24/15 02:20
480-89781-20	360109-SS-406011	Solid	10/22/15 10:10	10/24/15 02:20
480-89781-21	360109-SS-405000	Solid	10/22/15 10:25	10/24/15 02:20
480-89781-22	360109-SS-405008	Solid	10/22/15 10:30	10/24/15 02:20
480-89781-23	360109-SS-405012	Solid	10/22/15 10:35	10/24/15 02:20
480-89781-24	360109-SS-404000	Solid	10/22/15 10:45	10/24/15 02:20
480-89781-25	360109-SS-404006	Solid	10/22/15 10:50	10/24/15 02:20
480-89781-26	360109-SS-404011	Solid	10/22/15 10:55	10/24/15 02:20
480-89781-27	360109-SS-403000	Solid	10/22/15 11:10	10/24/15 02:20
480-89781-28	360109-SS-403006	Solid	10/22/15 11:15	10/24/15 02:20
480-89781-29	360109-SS-403012	Solid	10/22/15 11:20	10/24/15 02:20
480-89781-30	360109-SS-402000	Solid	10/22/15 11:35	10/24/15 02:20
480-89781-31	360109-SS-402006	Solid	10/22/15 11:40	10/24/15 02:20
480-89781-32	360109-SS-402011	Solid	10/22/15 11:45	10/24/15 02:20
480-89781-33	360109-SS-401000	Solid	10/22/15 12:00	10/24/15 02:20
480-89781-34	360109-SS-401006	Solid	10/22/15 12:05	10/24/15 02:20
480-89781-35	360109-SS-401011	Solid	10/22/15 12:10	10/24/15 02:20
480-89781-36	360109-SS-400000	Solid	10/22/15 12:18	10/24/15 02:20
480-89781-37	360109-SS-400005	Solid	10/22/15 12:21	10/24/15 02:20
480-89781-38	360109-SS-400012	Solid	10/22/15 12:25	10/24/15 02:20
480-89781-39	360109-SS-301006	Solid	10/22/15 12:40	10/24/15 02:20
480-89781-40	360109-SS-301006D	Solid	10/22/15 12:40	10/24/15 02:20
480-89781-41	360109-SS-301010	Solid	10/22/15 12:42	10/24/15 02:20
480-89781-42	360109-SS-301012	Solid	10/22/15 12:45	10/24/15 02:20
480-89781-43	360109-GW-30114	Water	10/22/15 14:30	10/24/15 02:20
480-89781-44	360109-GW-40815	Water	10/22/15 15:15	10/24/15 02:20
480-89781-45	QC-TB102215-XX	Water	10/22/15 16:00	10/24/15 02:20

6016 per COC and all US should be GS per COC; changed in database during data load on 11/6/15 (lab notified via email for re-issue of report / EDD) on 11/6/15

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Job Narrative
480-89781-1

Revision II
Report was revised to correct a sample ID missed on the 1st revision as per client request.

Revision I
Report was revised to correct sample ID's as per client request.

Receipt
The samples were received on 10/24/2015 2:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.5° C and 0.8° C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271536 recovered above the upper control limit for Carbon disulfide and Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 360109-US506011 (480-89781-4), 360109-US506011D (480-89781-5), 360109-US5061016 (480-89781-6), 360109-US507012 (480-89781-9), 360109-SS-406000 (480-89781-18), 360109-SS-406006 (480-89781-19), 360109-SS-406011 (480-89781-20) and 360109-SS-405000 (480-89781-21). OK; remove lab quals

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271536 recovered outside acceptance criteria, low biased, for Carbon tetrachloride and Dibromochloromethane. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detects for these analytes, the data have been reported. The following samples are impacted 360109-US506011 (480-89781-4), 360109-US506011D (480-89781-5), 360109-US5061016 (480-89781-6), 360109-US507012 (480-89781-9), 360109-SS-406000 (480-89781-18), 360109-SS-406006 (480-89781-19), 360109-SS-406011 (480-89781-20) and 360109-SS-405000 (480-89781-21). OK; remove lab quals

Method(s) 8260C: The laboratory control sample duplicate (LCSD) for preparation batch 480-271462 and analytical batch 480-271536 recovered outside control limits for the following analytes: Carbon disulfide. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: 360109-US506011 (480-89781-4), 360109-US506011D (480-89781-5), 360109-US5061016 (480-89781-6), 360109-US507012 (480-89781-9), 360109-SS-406000 (480-89781-18), 360109-SS-406006 (480-89781-19), 360109-SS-406011 (480-89781-20) and 360109-SS-405000 (480-89781-21). OK; remove lab quals

Method(s) 8260C: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 480-271462 and analytical batch 480-271536 recovered outside control limits for several analytes. The following samples are impacted: 360109-US506011 (480-89781-4), 360109-US506011D (480-89781-5), 360109-US5061016 (480-89781-6), 360109-US507012 (480-89781-9), 360109-SS-406000 (480-89781-18), 360109-SS-406006 (480-89781-19), 360109-SS-406011 (480-89781-20) and 360109-SS-405000 (480-89781-21). Carbon tetrachloride RPD=40; else <35 OK; all ND no quals

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: 360109-US506011D (480-89781-5), 360109-US5061016 (480-89781-6) and 360109-US507012 (480-89781-9). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271713 recovered above the upper control limit for Acetone. The samples associated with this CCV were not detected above the reporting limit for the affected analyte; therefore, the data has been reported. The following samples are impacted: 360109-GW-30114 (480-89781-43) and QC-TB102215-XX (480-89781-45). OK ✓

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271713 recovered above the upper control limit for 2-Butanone. The samples associated with this CCV were not detected above the reporting limit for the affected analyte; therefore, the data have been reported. The following samples are impacted: 360109-GW-30114 (480-89781-43), 360109-GW-40815 (480-89781-44) and QC-TB102215-XX (480-89781-45). ✓ OK

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-271713 recovered outside control limits for the following analyte: Acetone. Acetone has been identified as a poor performing analyte when analyzed using this method; therefore, re-analysis was not performed. the following samples are impacted: 360109-GW-30114 (480-89781-43), 360109-GW-40815 (480-89781-44) and QC-TB102215-XX (480-89781-45). ✓ OK

Method(s) 8260C: Due to the coelution of Ethyl Acetate with 2-Butanone in the full spike solution, these analytes exceeded control limits in the laboratory control sample (LCS) associated with batch 480-271713 . The following samples are impacted: 360109-GW-30114 (480-89781-43) and QC-TB102215-XX (480-89781-45). ✓ OK

Method(s) 8260C: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 480-271462 recovered outside control limits for the following analytes: Acetone, Bromoform, Carbon Tetrachloride, Chlorodibromomethane, and Trichlorofluoromethane. The following samples are impacted: ? not primary site ND in samples; no quals; carbon tet RPD=40 OK ✓

Method(s) 8260C: The laboratory control sample duplicate (LCSD) for batch preparation batch 480-271462 and analytical batch 480-271475 recovered outside control limits for the following analyte: Carbon Disulfide. The analyte was biased high in the LCSD and ✓ OK

all else <35; carbon tet ND; no quals

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were not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: 360109-MH001010 (480-89781-2), 360109-US506003 (480-89781-3), 360109-US506011 (480-89781-4), 360109-US506011D (480-89781-5), 360109-US5061016 (480-89781-6), 360109-US507003 (480-89781-7), 360109-US507009 (480-89781-8), 360109-US507012 (480-89781-9), 360109-SS-408000 (480-89781-11), 360109-SS-408007 (480-89781-12), 360109-SS-408011 (480-89781-13), 360109-SS-407000 (480-89781-14), 360109-SS-407006 (480-89781-15), 360109-SS-407006D (480-89781-16) and 360109-SS-407012 (480-89781-17). ✓ OK

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271485 recovered above the upper control limit for 2-Butanone. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: QC-TB10202015-XX (480-89781-1), 360109-SS-402011 (480-89781-32) and 360109-SS-401011 (480-89781-35). ✓ OK

Method(s) 8260C: The method blank for 480-271492 contained Toluene and Tetrachloroethane above the method detection limit. These target analyte concentrations were less than the reporting limit (RL); therefore, re-analysis of samples was not performed. The following samples are impacted: QC-TB10202015-XX (480-89781-1), 360109-SS-402011 (480-89781-32) and 360109-SS-401011 (480-89781-35). See attached

Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 480-271713 was outside the method criteria for the following analyte: Acetone. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated. The following sample is impacted: 360109-GW-40815 (480-89781-44). OK; not primary site contaminant but (J) since lab qualid

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271804 recovered outside acceptance criteria, low biased, for Chloromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following sample is impacted 360109-GW-30114 (480-89781-43). OK

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: 360109-GW-30114 (480-89781-43). Elevated reporting limits (RLs) are provided. (not significant data limit)

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271776 recovered above the upper control limit for Carbon disulfide. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 360109-SS-402000 (480-89781-30), 360109-SS-301006D (480-89781-40) and 360109-SS-301010 (480-89781-41). OK

Method(s) 8260C: The laboratory control sample for preparation batch 480-271503 and analytical batch 480-271776 recovered outside control limits for the following analyte: 1,2-Dibromo-3-Chloropropane. 1,2-Dibromo-3-Chloropropane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction and re-analysis was not performed. The following samples are impacted 360109-SS-402000 (480-89781-30), 360109-SS-301006D (480-89781-40) and 360109-SS-301010 (480-89781-41). 55% (UJ) all; not interpreted to be significant data limitation

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: 360109-SS-402000 (480-89781-30). Elevated reporting limits (RLs) are provided. OK; not primary site contaminant

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271718 recovered outside acceptance criteria, low biased, for Carbon Tetrachloride and Chlorodibromomethane. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for these analyte, the data have been reported. The following samples are impacted: 360109-US506011 (480-89781-4), 360109-US508013 (480-89781-10), 360109-SS-405008 (480-89781-22), 360109-SS-405012 (480-89781-23), 360109-SS-404000 (480-89781-24), 360109-SS-404006 (480-89781-25), 360109-SS-404011 (480-89781-26), 360109-SS-403000 (480-89781-27), 360109-SS-403006 (480-89781-28), 360109-SS-403012 (480-89781-29), 360109-SS-402000 (480-89781-30), 360109-SS-402006 (480-89781-31), 360109-SS-401000 (480-89781-33), 360109-SS-401006 (480-89781-34), 360109-SS-400000 (480-89781-36), 360109-SS-400005 (480-89781-37), 360109-SS-400012 (480-89781-38) and 360109-SS-301006 (480-89781-39) OK; NO qual

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-271718 recovered above the upper control limit for Carbon Disulfide. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 360109-US506011 (480-89781-4), 360109-US508013 (480-89781-10), 360109-SS-405008 (480-89781-22), 360109-SS-405012 (480-89781-23), 360109-SS-404000 (480-89781-24), 360109-SS-404006 (480-89781-25), 360109-SS-404011 (480-89781-26), 360109-SS-403000 (480-89781-27), 360109-SS-403006 (480-89781-28), 360109-SS-403012 (480-89781-29), 360109-SS-402000 (480-89781-30), 360109-SS-402006 (480-89781-31), 360109-SS-401000 (480-89781-33), 360109-SS-401006 (480-89781-34), 360109-SS-400000 (480-89781-36), 360109-SS-400005 (480-89781-37), 360109-SS-400012 (480-89781-38) and 360109-SS-301006 (480-89781-39) OK

Method(s) 8260C: The laboratory control sample (LCS) for preparation batch 480-271503 and analytical batch 480-271718 recovered outside control limits for the following analyte: 1,2-Dibromo-3-Chloropropane. 1,2-Dibromo-3-Chloropropane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction and re-analysis was not performed. The following samples are impacted: 360109-SS-405008 (480-89781-22), 360109-SS-405012 (480-89781-23), 360109-SS-404000 (480-89781-24), 360109-SS-404006 (480-89781-25), 360109-SS-404011 (480-89781-26), 360109-SS-403000 (480-89781-27), 360109-SS-403006 (480-89781-28), 360109-SS-403012 (480-89781-29), 360109-SS-402000 (480-89781-30), 360109-SS-402006 (480-89781-31), 360109-SS-401000 (480-89781-33), 360109-SS-401006 (480-89781-34), 360109-SS-400000 (480-89781-36), 360109-SS-400005 (480-89781-37), 360109-SS-400012 (480-89781-38) and 360109-SS-301006 (480-89781-39). OK

55% (UJ) all; not interpreted to be significant data limitation

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Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: 360109-US506011 (480-89781-4). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-272015 recovered above the upper control limit for Carbon Disulfide. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 360109-SS-301012 (480-89781-42). OK

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-272015 recovered outside acceptance criteria, low biased, for 1,1,2-Trichloro-1,2,2-trifluoroethene, Cyclohexane, and Methylcyclohexane . A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for this analytes, the data have been reported. The following samples are impacted: 360109-SS-301012 (480-89781-42). OK

Method(s) 8260C: The laboratory control sample (LCS) for preparation batch 480-272003 and analytical batch 480-272015 recovered outside control limits for the following analyte: Carbon Disulfide. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: 360109-SS-301012 (480-89781-42).

Method(s) 8260C: The laboratory control sample duplicate (LCSD) for preparation batch 480-271462 and analytical batch 480-271718 recovered outside control limits for the following analyte: Carbon disulfide. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: 360109-US506011 (480-89781-4) and 360109-US508013 (480-89781-10). OK OK

Method(s) 8260C: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 480-271462 and analytical batch 480-271718 recovered outside control limits for the following analytes: Acetone, Bromoform, Carbon tetrachloride, Chlorodibromomethane, and Trichlorofluoromethane. The following samples are impacted: 360109-US506011 (480-89781-4) and 360109-US508013 (480-89781-10). ND in sample; no qual OK

Method(s) 8260C: The following sample was received with the preparation holding time expired. As such, the laboratory had to perform the analysis outside of holding time: QC-TB10202015-XX (480-89781-1). TB; no action; remove lab "bl" qual.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

11/9/15

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89781-1

Method Blank - Batch: 480-271492

Method Blank

Method: 8260C
Preparation: 5035A

Lab Sample ID:	MB 480-271492/2-A	Analysis Batch:	480-271485	Instrument ID:	HP5973F
Client Matrix:	Solid	Prep Batch:	480-271492	Lab File ID:	F1900.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.17 g
Analysis Date:	10/28/2015 0048	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	10/27/2015 2239				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	ND		0.35	4.8
1,1,2,2-Tetrachloroethane	ND		0.78	4.8
1,1,2-Trichloroethane	ND		0.63	4.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.1	4.8
1,1-Dichloroethane	ND		0.59	4.8
1,1-Dichloroethene	ND		0.59	4.8
1,2,4-Trichlorobenzene	ND		0.29	4.8
1,2-Dibromo-3-Chloropropane	ND	Applies to	2.4	4.8
1,2-Dichlorobenzene	ND		0.38	4.8
1,2-Dichloroethane	ND	-32	0.24	4.8
1,2-Dichloropropane	ND		2.4	4.8
1,3-Dichlorobenzene	ND	-35	0.25	4.8
1,4-Dichlorobenzene	ND		0.68	4.8
2-Butanone (MEK)	ND		1.8	24
2-Hexanone	ND		2.4	24
4-Methyl-2-pentanone (MIBK)	ND		1.6	24
Acetone	ND		4.1	24
Benzene	ND		0.24	4.8
Bromodichloromethane	ND		0.65	4.8
Bromoform	ND		2.4	4.8
Bromomethane	ND		0.44	4.8
Carbon disulfide	ND		2.4	4.8
Carbon tetrachloride	ND		0.47	4.8
Chlorobenzene	ND		0.64	4.8
Chloroethane	ND		1.1	4.8
Chloroform	ND		0.30	4.8
Chloromethane	ND		0.29	4.8
cis-1,2-Dichloroethene	ND		0.62	4.8
cis-1,3-Dichloropropene	ND		0.70	4.8
Cyclohexane	ND		0.68	4.8
Dibromochloromethane	ND		0.62	4.8
1,2-Dibromoethane	ND		0.62	4.8
Dichlorodifluoromethane	ND		0.40	4.8
Ethylbenzene	ND		0.33	4.8
Isopropylbenzene	ND		0.73	4.8
Methyl acetate	ND		2.9	4.8
Methyl tert-butyl ether	ND		0.47	4.8
Methylcyclohexane	ND		0.74	4.8
Methylene Chloride	ND		2.2	4.8
Styrene	ND		0.24	4.8
Tetrachloroethene (U) SS-401011	1.66	5x J = 8.3	0.65	4.8
Toluene (ND) else >	0.943	J	0.37	4.8
trans-1,2-Dichloroethene	ND		0.50	4.8
trans-1,3-Dichloropropene action level	ND		2.1	4.8
Trichloroethene	ND		1.1	4.8

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89781-1

Client Sample ID: **QC-TB10202015-XX**

Lab Sample ID: 480-89781-1
Client Matrix: Solid

Soil TB

Date Sampled: 10/20/2015 1600
Date Received: 10/24/2015 0220

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-271485	Instrument ID:	HP5973F
Prep Method:	5035A	Prep Batch:	480-271492	Lab File ID:	F1901.D
Dilution:	1.0			Initial Weight/Volume:	5.137 g
Analysis Date:	10/28/2015 0204			Final Weight/Volume:	5 mL
Prep Date:	10/24/2015 0405				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane		ND	H	0.35	4.9
1,1,2,2-Tetrachloroethane		ND	H	0.79	4.9
1,1,2-Trichloroethane		ND	H	0.63	4.9
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	H	1.1	4.9
1,1-Dichloroethane		ND	H	0.59	4.9
1,1-Dichloroethene		ND	H	0.60	4.9
1,2,4-Trichlorobenzene		ND	H	0.30	4.9
1,2-Dibromo-3-Chloropropane		ND	H	2.4	4.9
1,2-Dichlorobenzene		ND	H	0.38	4.9
1,2-Dichloroethane		ND	H	0.24	4.9
1,2-Dichloropropane		ND	H	2.4	4.9
1,3-Dichlorobenzene		ND	H	0.25	4.9
1,4-Dichlorobenzene		ND	H	0.68	4.9
2-Butanone (MEK)		ND	H	1.8	24
2-Hexanone		ND	H	2.4	24
4-Methyl-2-pentanone (MIBK)		ND	H	1.6	24
Acetone		9.9	J H	4.1	24
Benzene		ND	H	0.24	4.9
Bromodichloromethane		ND	H	0.65	4.9
Bromoform		ND	H	2.4	4.9
Bromomethane		ND	H	0.44	4.9
Carbon disulfide		ND	H	2.4	4.9
Carbon tetrachloride		ND	H	0.47	4.9
Chlorobenzene		ND	H	0.64	4.9
Dibromochloromethane		ND	H	0.62	4.9
Chloroethane		ND	H	1.1	4.9
Chloroform		ND	H	0.30	4.9
Chloromethane		ND	H	0.29	4.9
cis-1,2-Dichloroethene		ND	H	0.62	4.9
cis-1,3-Dichloropropene		ND	H	0.70	4.9
Cyclohexane		ND	H	0.68	4.9
Dichlorodifluoromethane		ND	H	0.40	4.9
Ethylbenzene		ND	H	0.34	4.9
1,2-Dibromoethane		ND	H	0.62	4.9
Isopropylbenzene		ND	H	0.73	4.9
Methyl acetate		ND	H	2.9	4.9
Methyl tert-butyl ether		ND	H	0.48	4.9
Methylcyclohexane		ND	H	0.74	4.9
Methylene Chloride		ND	H	2.2	4.9
Styrene		ND	H	0.24	4.9
Tetrachloroethene		2.4	J H B	0.65	4.9
Toluene		ND	H	0.37	4.9
trans-1,2-Dichloroethene		ND	H	0.50	4.9
trans-1,3-Dichloropropene		ND	H	2.1	4.9
Trichloroethene		ND	H	1.1	4.9
Trichlorofluoromethane		ND	H	0.46	4.9

Applies to all soil samples

55-407006
55-401011
Subset

(4) else > A.L.

Sx = 12 ug/kg

11/9/15

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89781-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-271503

Method: 8260C
Preparation: 5035

MS Lab Sample ID:	480-89781-29	Analysis Batch:	480-271718	Instrument ID:	HP5973G
Client Matrix:	Solid	Prep Batch:	480-271503	Lab File ID:	G44302.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	6.998 g
Analysis Date:	10/29/2015 0507			Final Weight/Volume:	5 mL
Prep Date:	10/24/2015 0405				5 mL
Leach Date:	N/A				

70-130 / 35

MSD Lab Sample ID:	480-89781-29	Analysis Batch:	480-271718	Instrument ID:	HP5973G
Client Matrix:	Solid	Prep Batch:	480-271503	Lab File ID:	G44301.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	6.714 g
Analysis Date:	10/29/2015 0445			Final Weight/Volume:	5 mL
Prep Date:	10/24/2015 0405				5 mL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	119	117	64 - 116	2	20	F1	F1
1,1,2,2-Tetrachloroethane	104	112	75 - 120	11	20		
1,1,2-Trichloroethane	119	126	70 - 130	9	20		
1,1,2-Trichloro-1,2,2-trifluoroethane	80	89	40 - 120	15	20		
1,1-Dichloroethane	107	123	82 - 138	18	20		
1,1-Dichloroethene	102	118	50 - 147	19	20		
1,2,4-Trichlorobenzene J+ (ND)	131	138	40 - 160	10	20		
1,2-Dibromo-3-Chloropropane	71	71	60 - 110	4	20		
1,2-Dibromoethane	122	126	81 - 119	7	20	F1	F1
1,2-Dichlorobenzene	120	130	80 - 132	12	20		
1,2-Dichloroethane	109	115	78 - 129	9	20		
1,2-Dichloropropane J+ (ND)	164	134	76 - 125	16	20	F1	F1
1,3-Dichlorobenzene J+ ↓	124	133	63 - 134	12	20		
1,4-Dichlorobenzene	119	128	60 - 134	11	20		
2-Hexanone	109	113	70 - 127	8	20		
2-Butanone (MEK)	102	122	54 - 149	21	20		F2
4-Methyl-2-pentanone (MIBK)	110	115	74 - 120	8	20		
Acetone	97	113	47 - 141	19	20		
Benzene J+ (ND)	120	132	77 - 125	13	20		F1
Bromodichloromethane	130	97	71 - 121	24	20	F1	F2
Bromoform J (UJ)	73	69	48 - 125	2	20		
Bromomethane	99	87	39 - 149	9	20		
Carbon disulfide	116	125	40 - 136	11	20		
Carbon tetrachloride	98	93	54 - 135	1	20		
Chlorobenzene J+ (ND)	131	135	76 - 126	7	20	F1	F1
Dibromochloromethane	85	80	64 - 118	2	20		
Chloroethane J (UJ)	49	43	23 - 164	10	20		
Chloroform	114	123	78 - 118	12	20		F1
Chloromethane	126	106	61 - 124	13	20	F1	
cis-1,2-Dichloroethene J+ (ND)	118	131	79 - 124	15	20		F1
cis-1,3-Dichloropropene J+ ↓	156	126	75 - 121	18	20	F1	F1
Cyclohexane	100	118	49 - 129	21	20		F2
Dichlorodifluoromethane J (UJ)	38	33	10 - 150	10	20		

11/9/15

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89781-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-271503

Method: 8260C
Preparation: 5035

MS Lab Sample ID:	480-89781-29	Analysis Batch:	480-271718	Instrument ID:	HP5973G
Client Matrix:	Solid	Prep Batch:	480-271503	Lab File ID:	G44302.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	6.998 g
Analysis Date:	10/29/2015 0507			Final Weight/Volume:	5 mL
Prep Date:	10/24/2015 0405				5 mL
Leach Date:	N/A				

70-130 / 35

MSD Lab Sample ID:	480-89781-29	Analysis Batch:	480-271718	Instrument ID:	HP5973G
Client Matrix:	Solid	Prep Batch:	480-271503	Lab File ID:	G44301.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	6.714 g
Analysis Date:	10/29/2015 0445			Final Weight/Volume:	5 mL
Prep Date:	10/24/2015 0405				5 mL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD ✓	RPD Limit	MS Qual	MSD Qual
Ethylbenzene J+ (ND)	129	133	78 - 124	7	20	F1	F1
Isopropylbenzene	120	130	76 - 119	12	20	F1	F1
Methyl acetate	102	128	71 - 123	27	20		F1 F2
Methyl tert-butyl ether	112	124	67 - 137	14	20		
Methylcyclohexane J+ (ND)	157	118	50 - 130	25	20	F1	F2
Methylene Chloride	115	130	75 - 118	17	20		F1
Styrene J+ (ND)	134	138	84 - 119	7	20	F1	F1
Tetrachloroethene (J+)	146	149	73 - 133	6	20	F1	F1
Toluene	120	125	75 - 124	8	20		F1
trans-1,2-Dichloroethene	116	126	74 - 129	13	20		
trans-1,3-Dichloropropene	113	118	73 - 118	8	20		
Trichloroethene J+ (ND)	169	136	75 - 131	18	20	F1	F1
Trichlorofluoromethane J (UJ)	72	60	29 - 158	14	20		
Vinyl chloride	107	88	59 - 124	15	20		
Xylenes, Total J+ (ND)	133	137	78 - 125	7	20	F1	F1

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91	89	53 - 146
Toluene-d8 (Surr)	96	94	50 - 149
4-Bromofluorobenzene (Surr)	107	105	49 - 148

JM
11/9/15

EXECUTIVE SUMMARY - Detections

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-89781-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
480-89781-1	**QC-TB10202015-XX**					
Acetone		9.9	J H	24	ug/Kg	8260C
Tetrachloroethene		2.4	J H B	4.9	ug/Kg	8260C
480-89781-2	**360109-MH001010**					
1,1,1-Trichloroethane		92	J	150	ug/Kg	8260C
1,1-Dichloroethane		180		150	ug/Kg	8260C
Acetone		810	*	730	ug/Kg	8260C
cis-1,2-Dichloroethene		100	J	150	ug/Kg	8260C
Methyl acetate		700		150	ug/Kg	8260C
Methylcyclohexane		98	J	150	ug/Kg	8260C
trans-1,2-Dichloroethene		38	J	150	ug/Kg	8260C
Vinyl chloride		140	J	150	ug/Kg	8260C
Percent Moisture		56		0.10	%	Moisture
Percent Solids		44		0.10	%	Moisture
480-89781-3	**360109-GS506003**					
Percent Moisture		17		0.10	%	Moisture
Percent Solids		83		0.10	%	Moisture
		506011D		RPD		
480-89781-4	**360109-GS506011**					
1,1,1-Trichloroethane		33	OK	30	ug/Kg	8260C
1,1-Dichloroethane		32		30	ug/Kg	8260C
1,1-Dichloroethene		150		30	ug/Kg	8260C
1,2-Dichlorobenzene		240		30	ug/Kg	8260C
1,4-Dichlorobenzene		320		30	ug/Kg	8260C
cis-1,2-Dichloroethene		87000		6100	ug/Kg	8260C
Cyclohexane		480		30	ug/Kg	8260C
Ethylbenzene		8700		6100	ug/Kg	8260C
Isopropylbenzene		1100		30	ug/Kg	8260C
Methylcyclohexane		2700		30	ug/Kg	8260C
Tetrachloroethene		250000		6100	ug/Kg	8260C
Toluene		240		30	ug/Kg	8260C
trans-1,2-Dichloroethene		240		30	ug/Kg	8260C
Trichloroethene		300000		6100	ug/Kg	8260C
Vinyl chloride		1800	910	30	66 ug/Kg	<100 8260C OK
Xylenes, Total		270	97	61	94 ug/Kg	<100 8260C OK
Percent Moisture		10	OK	0.10	%	Moisture
Percent Solids		90		0.10	%	Moisture

JV 11/9/15

Surrogate Recovery Report

8260C Volatile Organic Compounds by GC/MS

70-130

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec	
480-89781-2	360109-MH001010	100	101	109	
480-89781-3	360109-GS506003	99	99	106	
480-89781-4	360109-GS506011	(56)	(60)	(61)	(J1uJ) result from original run
480-89781-4 DL	360109-GS506011 DL	91	95	104	
480-89781-5	360109-GS506011D	85	(59)	(66)	(J1uJ) result from original run
480-89781-5 DL	360109-GS506011D DL	92	93	102	
480-89781-6	360109-GS506016	111	(56)	(62)	(J1uJ) result from original run
480-89781-6 DL	360109-GS506016 DL	94	94	103	
480-89781-7	360109-GS507003	92	96	106	
480-89781-8	360109-GS507009	91	90	99	
480-89781-9	360109-GS507012	94	(67)	(73)	(J1uJ) result from original run
480-89781-9 DL	360109-GS507012 DL	91	86	92	
480-89781-10	360109-GS508013	94	97	108	
480-89781-11	360109-SS-408000	92	95	104	
480-89781-12	360109-SS-408007	93	95	106	
480-89781-13	360109-SS-408011	91	94	105	
480-89781-14	360109-SS-407000	91	90	100	
480-89781-15	360109-SS-407006	90	97	107	
480-89781-16	360109-SS-407006D	92	95	104	
480-89781-17	360109-SS-407012	94	96	106	
480-89781-18	360109-SS-406000	96	96	104	
480-89781-19	360109-SS-406006	92	96	105	
480-89781-20	360109-SS-406011	91	96	106	
480-89781-21	360109-SS-405000	90	95	105	
480-89781-22	360109-SS-405008	93	96	106	
480-89781-23	360109-SS-405012	95	96	104	
480-89781-24	360109-SS-404000	94	95	106	

Jr 11/9/15

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	53-146
TOL = Toluene-d8 (Surr)	50-149
BFB = 4-Bromofluorobenzene (Surr)	49-148

Checked for completeness of parameters requested 11/19/15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 480-89781-1

Job Description: Industrial Overall Service site

For:
AMEC Foster Wheeler E & I, Inc
511 Congress St. Suite 200
Portland, ME 04101

Attention: Jean Firth

Joseph V. Giacomazza

Approved for release.
Joe V Giacomazza
Project Management Assistant II
11/6/2015 3:23 PM

Designee for
Brian J Fischer, Manager of Project Management
10 Hazelwood Drive, Amherst, NY, 14228-2298
(716)504-9835
brian.fischer@testamericainc.com
11/06/2015
Revision: 2

cc: Mr. Tige Cunningham

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report. TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NHDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

VOCs

PROJECT CATEGORY A REVIEW RECORD
Project: Industrial Overall
Method : SW-846 8260B 8260c
Laboratory and SDG(s): TAL SDG# 480-90144-1
Date: 11/11/15
Reviewer: Julie Ricardi
Review Level [X] CATEGORY A

1. ☑ **Case Narrative Review and COC/Data Package Completeness** COMMENTS
   Were problems noted? See attached; no action needed.

   Were all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)

   Are Field Sample IDs and Locations assigned correctly? (YES) NO (circle one)

2. ☑ **Holding time and Sample Collection**
   All samples were analyzed within the 14 day holding time. (YES) NO (circle one)

3. ☑ **QC Blanks**
   Are method blanks free of contamination? (YES) NO (circle one)

   Are Trip blanks free of contamination? (YES) NO (circle one)

   Are Rinse blanks free of contamination? YES NO (NA) (circle one)

4. ☑ **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)
   Were MS/MSDs submitted/analyzed? (YES) NO
   360190 - MW-50102 MS/MSD; See attached for (evals)
   Were all results were within the Region II limits? YES (NO) NA (circle one)

5. ☑ **Field Duplicates** - Region II Limits (water RPD 50, soil RPD 100)
   Were Field Duplicates submitted/analyzed? YES (NO)

   Were all results were within Region II Limits? YES NO (NA) (circle one)

6. ☑ **Reporting Limits:** Were samples analyzed at a dilution? YES NO (circle one)
   Sample 360109 - MW-50522 (100x), MW-50410 (100x) analyzed
7. ☑ **Electronic Data Review and Edits** at dilutions for target compounds 1,1,1-TCA; 1,1-DCE; TCE; 1,1-DCA
   Does the EDD match the Form I's? (YES) NO (circle one) (elvated RLs for all ND cmpds)

8. ☑ **Table Review** **Table 1** (sample Listing), **Table 2** (results summary), **Table 3** (Reason Codes), **Table 4** (TICs). Did lab report TICs? YES (NO) (circle one)

Note: Elevated RLs (100x) reported for MW-50522 and MW-50410 due to high concentrations of:

1,1,1-TCA
1,1-DCE
TCE
1,1-DCA

Surrogates all OK

SAMPLE SUMMARY

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-90144-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-90144-1	QC-TB102615-XX	Solid	10/26/2015 1700	10/30/2015 0230
480-90144-2	360109-GS-503003	Solid	10/26/2015 1703	10/30/2015 0230
480-90144-3	360109-GS-503006	Solid	10/26/2015 1720	10/30/2015 0230
480-90144-4	QC-TB102715-XX	Water	10/27/2015 1400	10/30/2015 0230
480-90144-5	360109-MW-50522	Water	10/27/2015 1515	10/30/2015 0230
480-90144-6	360109-MW-50410	Water	10/27/2015 1620	10/30/2015 0230
480-90144-7	360109-MW-50102	Water	10/27/2015 1840	10/30/2015 0230
480-90144-7MS	360109-MW-50102MS	Water	10/27/2015 1840	10/30/2015 0230
480-90144-7MSD	360109-MW-50102MD	Water	10/27/2015 1840	10/30/2015 0230

Job Narrative
480-90144-1

Receipt
The samples were received on 10/30/2015 2:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.2° C.

Receipt Exceptions
Terra Core sampled 10/26/2015. Recevived 10/30/2015 placed in freezer at 0535

GC/MS VOA
Method(s) 8260C: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 480-272915 and analytical batch 480-273174 recovered outside control limits for the following analytes: Acetone and 2-Butanone (MEK). The following samples are impacted: QC-TB102615-XX (480-90144-1), 360109-GS-503003 (480-90144-2) and 360109-GS-503006 (480-90144-3). not primary site contaminents; no qual

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-273903 recovered above the upper control limit for 1,1,2-Trichloro-1,2,2-trifluoroethane. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following samples are impacted: QC-TB102715-XX (480-90144-4), 360109-MW-50522 (480-90144-5) and 360109-MW-50410 (480-90144-6). no action; no impact

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: 360109-MW-50522 (480-90144-5) and 360109-MW-50410 (480-90144-6). Elevated reporting limits (RLs) are provided.
100x 100x
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

jn
11/12/13

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 480-90144-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-274025

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-90144-7	Analysis Batch:	480-274025	Instrument ID:	HP5973G
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	G44580.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/10/2015 0755			Final Weight/Volume:	5 mL
Prep Date:	11/10/2015 0755				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	480-90144-7	Analysis Batch:	480-274025	Instrument ID:	HP5973G
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	G44581.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/10/2015 0817			Final Weight/Volume:	5 mL
Prep Date:	11/10/2015 0817				5 mL
Leach Date:	N/A				

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Analyte	% Rec. MS	% Rec. MSD	Limit	RPD ✓	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	89	94	73 - 126	6	15		
1,1,2,2-Tetrachloroethane	93	92	70 - 126	1	15		
1,1,2-Trichloro-1,2,2-trifluoroethane	99	96	52 - 148	3	20		
1,1,2-Trichloroethane	86	86	76 - 122	0	15		
1,1-Dichloroethane	88	92	71 - 129	4	20		
1,1-Dichloroethene	94	96	58 - 121	2	16		
1,2,4-Trichlorobenzene	93	99	70 - 122	6	20		
1,2-Dibromo-3-Chloropropane	91	93	56 - 134	2	15		
1,2-Dibromoethane	92	93	77 - 120	1	15		
1,2-Dichlorobenzene	90	89	80 - 124	1	20		
1,2-Dichloroethane	91	91	75 - 127	0	20		
1,2-Dichloropropane	87	89	76 - 120	2	20		
1,3-Dichlorobenzene	91	90	77 - 120	1	20		
1,4-Dichlorobenzene	88	89	75 - 120	2	20		
2-Butanone (MEK)	111	109	57 - 140	1	20		
2-Hexanone	104	101	65 - 127	3	15		
4-Methyl-2-pentanone (MIBK)	97	95	71 - 125	2	35		
Acetone	104	104	56 - 142	1	15		
Benzene	90	93	71 - 124	2	13		
Bromodichloromethane	90	93	80 - 122	3	15		
Bromoform	86	92	52 - 132	7	15		
Bromomethane	97	84	55 - 144	15	15		
Carbon disulfide	81	85	59 - 134	4	15		
Carbon tetrachloride	90	94	72 - 134	5	15		
Chlorobenzene	89	89	72 - 120	0	25		
Chloroethane	98	82	69 - 136	17	15		F2
Chloroform	89	93	73 - 127	4	20		
Chloromethane	87	87	68 - 124	0	15		
cis-1,2-Dichloroethene	89	92	74 - 124	3	15		
cis-1,3-Dichloropropene	88	89	74 - 124	2	15		
Cyclohexane J | UJ	(68)	(69)	59 - 135	2	20		
Dibromochloromethane	89	90	75 - 125	1	15		
Dichlorodifluoromethane	91	85	59 - 135	7	20		

JR 11/12/15

All else OK

Checked for completeness of parameters requested 11/12/15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 480-90144-1

Job Description: Industrial Overall Service site

For:
AMEC Foster Wheeler E & I, Inc
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Attention: Jean Firth

Joseph V. Giacomazza

Approved for release.
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11/12/2015 4:28 PM

Designee for
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11/12/2015

cc: Mr. Tige Cunningham

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REVIEW OF HAPSITE GC/MS FIELD SCREENING DATA

AIR SAMPLING ANALYSIS DATES 10/26/15-10/28/15

INDUSTRIAL OVERALL UNIFORM CORPORATION SITE

Air samples were collected and analyzed 10/26/15 – 10/28/15 at the Industrial Overall Uniform Corporation Site as on-site screening data for the following volatile organic compounds:

- Vinyl chloride
- Trichloroethene
- Tetrachloroethene

The instrument logbook and electronic summary of sample results were reviewed for adherence to the Amec Foster Wheeler Standard Operating Procedure, "SOP for Hapsite GC/MS Field Instrument Operation and On-Site Sample Analysis of VOC Grab Samples," quality control results, and transcriptions/calculations.

The following items were reviewed:

- Calibration - All initial calibrations and continuing calibrations associated with sample analyses were within control limits specified in the SOP.
- Data Transcriptions - All sample results were accurately transcribed from the logbook to the electronic table of sample results.
- Final Result Calculation - Calculations were performed on ten percent of the results and reporting limits to verify accurate conversion of concentrations from ppbv to ug/m3. Final review of the data indicates results were reported correctly.

The following minor difference between the SOP and analytical practice was noted:

- The SOP suggests analyzing sample duplicates at a frequency of 1 per 20 samples as well as recording the barometric pressure during each day of sample analysis. Since the analyses performed were for screening purposes only, no sample duplicates were analyzed and no barometric pressure readings were recorded in the instrument logbook. The goal of recording barometric pressure is to monitor over time any effect ambient pressure has on the trends for increased or decreased concentrations of contaminants, and since the analyses were performed as a screening tool, the lack of barometric pressure readings is interpreted to have no adverse impact on sample results.

Based on the review, the data meet the data quality objectives for screening data.

Reviewed by: Julie Ricardi

November 17, 2015