

Peters Dry Cleaning
NIAGARA COUNTY
LOCKPORT, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: 932128

Prepared for:

New York State Department of Environmental Conservation
Buffalo, New York

Prepared by:

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Portland, Maine

Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date
0			

JULY 2025

CERTIFICATION STATEMENT

I, Charles Staples, certify that I am currently a Qualified Environmental Professional as in defined in 6 NYCRR Part 375 and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and Green Remediation (DER-31).



____ QEP

____ 07/31/2025 _____ DATE

TABLE OF CONTENTS

Peters Dry Cleaning NIAGARA COUNTY LOCKPORT, NEW YORK

SITE MANAGEMENT PLAN

<u>Section</u>	<u>Description</u>	<u>Page</u>
1.0	Introduction.....	1-1
1.1	General	1-1
1.2	Revisions and Alterations	1-2
1.3	Notifications.....	1-3
2.0	SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS	2-1
2.1	Site Location and Description.....	2-1
2.2	Physical Setting.....	2-1
2.3	Investigation and Remedial History.....	2-3
2.4	Remedial Action Objectives	2-7
2.5	Remaining Contamination	2-8
3.0	INSTITUTIONAL AND ENGINEERING CONTROL PLAN	3-1
3.1	General	3-1
3.2	Institutional Controls.....	3-1
3.3	Engineering Controls	3-3
4.0	MONITORING AND SAMPLING PLAN	4-1
4.1	General	4-1
4.2	Site – wide Inspection	4-2
4.3	Post-Remediation Media Monitoring and Sampling.....	4-4
5.0	OPERATION AND MAINTENANCE PLAN	5-1
5.1	General	5-1
5.2	Remedial System (or other Engineering Control) Performance Criteria	5-1
5.3	Operation and Maintenance of the SSDS.....	5-2
5.4	Operation and Maintenance of the Site Monitoring Wells	5-3
6.0	PERIODIC ASSESSMENTS/EVALUATIONS	6-1
6.1	Climate Change Vulnerability Assessment.....	6-1

6.2	Green Remediation Evaluation	6-2
7.0	REPORTING REQUIREMENTS	7-1
7.1	Site Management Reports	7-1
7.2	Periodic Review Report	7-3
7.3	Corrective Measures Work Plan	7-7
8.0	REFERENCES	8-1

TABLE OF CONTENTS (Continued)

List of Tables

Table 1.1 - Notifications
Table 2.1 - Groundwater Elevation Data
Table 2.2 - Remaining Groundwater Contamination
Table 2.3 – 2014 Post IRM Soil VOC Results
Table 4.1 - Post Remediation Sampling Requirements and Schedule
Table 4.2 – Monitoring Well Construction Details
Table 7.1 - Schedule of Interim Monitoring/Inspection Reports

List of Figures

Figure 1.1 - Site Location
Figure 1.2 - Site Layout
Figure 2.1 - Geologic Cross Section A-A'
Figure 2.2 - Geologic Cross Section B-B'
Figure 2.3 - Overburden Groundwater Contours
Figure 2.4 - VOCs in Groundwater – December 2024
Figure 2.5 – 2014 Post IRM Soil VOC Results

List of Appendices

Appendix A - Site Survey and Environmental Easement
Appendix B - List of Site Contacts
Appendix C – Responsibilities of Owner and Remedial Party
Appendix D - Monitoring Well Boring and Construction Logs
Appendix E - Excavation Work Plan
Appendix F - Site Management Forms
Appendix G – Standard Operating Procedures
Appendix H - Health and Safety Plan

List of Acronyms

AST	Above-ground Storage Tank
BCP	Brownfield Cleanup Program
bgs	below ground surface
COC	Certificate of Completion
EC	Engineering Control
ECL	Environmental Conservation Law
EEEG	Earth Environment Engineering and Geology, P.C.
ESA	Environmental Site Assessment
EWP	Excavation Work Plan
FAP	Field Activities Plan
FS	Feasibility Study
ft	feet
GZA	GZA GeoEnvironmental of New York
IC	Institutional Control
IRM	Interim Remedial Measure
MACTEC	MACTEC Engineering and Geology, P.C.
mg/kg	milligram per kilogram
MNA	Monitored Natural Attenuation
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
PCE	Perchloroethylene/Tetrachloroethylene (interchangeable)
PE	Professional Engineer
PRR	Periodic Review Report
QAPP	Quality Assurance Program Plan
QEP	Qualified Environmental Professional
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SI/AA	Site Investigation/Alternatives Assessment
SMP	Site Management Plan
SSDS	Sub-slab Depressurization system
SVI	Soil Vapor Intrusion
TCE	Trichloroethylene
µg/L	microgram per liter
UST	Underground Storage Tank
VOC	Volatile Organic Compound

ES EXECUTIVE SUMMARY

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan:

Site Identification: NYSDEC Site No. 932128, Peters Dry Cleaners, 316
Willow Street, Lockport, NY

Institutional Controls:	The property may be used for residential, commercial, or industrial use; however, the property is zoned as R1 for one family dwelling residential.
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	Institutional controls (ICs) for the Site are detailed in this Site Management Plan for the controlled property and include: • The property may be used for residential, restricted residential, commercial, or industrial use as described in 6 NYCRR Part 375-1.8(g)(2), although land use is subject to local zoning laws; • All ECs must be operated and maintained as specified in this Site Management Plan (SMP); • All ECs must be inspected at a frequency and in a manner defined in the SMP; • The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or the Niagara County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department; • Groundwater and other environmental or public health monitoring must be performed as defined in this SMP; • Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP; • All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
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Site Identification: NYSDEC Site No. 932128, Peters Dry Cleaners, 316 Willow Street, Lockport, NY

	• Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP; • Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP; • Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement; • The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 1.2, and any potential impacts that are identified must be monitored or mitigated; • The Site shall not be used for farming, raising livestock or producing animal products for human consumption; and
Engineering Controls:	• One sub-slab depressurization system (SSDS) is installed at a residence to the west of the Site. • 27 monitoring wells are present on and off site for long term groundwater monitoring and monitored natural attenuation.

Site Identification: NYSDEC Site No. 932128, Peters Dry Cleaners, 316
 Willow Street, Lockport, NY

Inspections:	Frequency
Site Inspection	Annually
SSDS exterior inspection	Annually
SSDS interior inspection	Every five years
Monitoring:	
Soil Vapor Intrusion Evaluation for New Buildings	As needed
Off-site Soil Vapor Intrusion Evaluation	As needed/requested
Groundwater monitoring wells as described in Section 4.3.1	Biannually
Maintenance:	
SSDS repair/upkeep	As needed
Monitoring wells	As needed
Reporting:	
Periodic Review Report	Annually
Groundwater Monitoring and Inspection Report	Biannually

Further descriptions of the above requirements are provided in detail in the latter sections of this Site Management Plan.

1.0 INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the Peters Dry Cleaners Site located at 316 Willow Street, Lockport, New York (hereinafter referred to as the “Site”). See **Figure 1.1**. The Site is currently in the New York State Inactive Hazardous Waste Disposal Site Remedial Program, Site No. 932128, which is administered by New York State Department of Environmental Conservation (NYSDEC or Department).

The NYSDEC is currently responsible for managing remaining contamination at the Site. A figure showing the site location and boundaries of this site is provided in **Figure 1.2**. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in **Appendix A**. A survey of the site is also included in **Appendix A**.

After completion of the remedial work, some contamination was left at this site, which is hereafter referred to as “remaining contamination”. Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Niagara County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site.

This SMP was prepared to manage remaining contamination at the site and off-site until the Environmental Easement is extinguished in accordance with Environmental Conservation Law (ECL) Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor’s successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC); and
- Failure to comply with this SMP is also a violation of ECL and 6 New York Codes, Rules and Regulations (NYCRR) Part 375, and thereby subject to applicable penalties.

All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the site is provided in **Appendix B** of this SMP.

This SMP was prepared by Earth Environment Engineering and Geology, P.C. (EEEG), formerly MACTEC Engineering and Geology, P.C. (MACTEC) on behalf of the NYSDEC, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the site.

1.2 Revisions and Alterations

Revisions and alterations to this plan will be proposed in writing to the NYSDEC's project manager. The NYSDEC can also make changes to the SMP. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shutdown of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the site conditions. All approved alterations must conform with Article 145 Section 7209 of the Education Law regarding the application of professional seals and alterations. For example, any changes to as-built drawings must be stamped by a New York State Professional Engineer. In accordance with the Environmental Easement for the site, the NYSDEC project manager

will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER – 10 for the following reasons:

1. 60-day advance notice of any proposed changes in site use that are required under the terms of 6 NYCRR Part 375 and/or ECL
2. 7-day advance notice of any field activity associated with the remedial program.
3. 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan (EWP). If the ground-intrusive activity qualifies as a change of use as defined in 6 NYCRR Part 375, the above mentioned 60-day advance notice is also required.
4. Notice within 48 hours of any damage or defect to the EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
5. Notice within 48 hours of any non-routine maintenance activities.
6. Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
7. Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

1. At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the environmental easement and all approved work plans and reports, including this SMP.
2. Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1.1 on the following page includes contact information for the above notifications. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in **Appendix B. Table 1.1: Notifications***

<u>Name</u>	<u>Contact Information</u>	<u>Required Notification**</u>
Jasmine Stefansky, NYSDEC Project Manager	(518) 402-9575; jasmine.stefansky@dec.ny.gov	All Notifications
Jeffrey Dyber, Remedial Bureau E Section Chief	(518) 402-9621; jeffrey.dyber@dec.ny.gov	All Notifications
Kelly Lewandowski, NYSDEC Site Control	518-402-9569, kelly.lewandowski@dec.ny.gov	Notifications 1 and 8
Daniel Tucholski, NYSDOH Project Manager	(518) 486-7016 daniel.tucholski@health.ny.gov	Notifications 4, 6, and 7

* Note: Notifications are subject to change and will be updated as necessary.

** Note: Numbers in this column reference the numbered bullets in the notification list in this section.

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The site is located in the City of Lockport, Niagara County, New York and is identified as Section 123.05 Block 2 and Lot 54 on the Niagara County Tax Map (see **Figure 1.2**). The site is an approximately 0.41-acre area and is bounded by Willow Street to the north, Altro Park to the northwest, residential properties to the south, residential properties to the east, and residential properties to the west (see **Figure 1.2** – Site Layout Map). The boundaries of the site are more fully described in **Appendix A** –Environmental Easement. The owner(s) of the site parcel(s) at the time of issuance of this SMP is:

Patrick McFall
2757 The Heights
Newfane, New York

Although Partick McFall is listed as the proper owner, for all intents and purposes the property has been abandoned and the City of Lockport has been granted Temporary Incidents of Ownership by Court Order of Justice Richard Klock under Index No. 150116. The City of Lockport anticipates conveying the property for redevelopment and has established an environmental easement for the property (**Appendix A**). Per agreement with the NYSDEC, the City of Lockport is not liable for past releases of hazardous substances or wastes on the Site and the NYSDEC is responsible for cleanup and monitoring of remaining contamination at the property. **Appendix C** outlines the responsibilities of the owner and remedial party.

2.2 Physical Setting

2.2.1 Land Use

The Site is currently an empty lot with a mostly gravel surface following the demolition of the on-site building. The Site is zoned residential (R1) and is currently vacant. The original on-site dry cleaners building was demolished in October 2013.

The properties adjoining the Site and in the neighborhood surrounding the Site primarily include residential properties. The properties immediately south, west, north, and east of the Site include residential properties.

2.2.2 Geology

Geologic cross sections are shown on **Figures 2.1** and **2.2**. Site specific boring logs are provided in **Appendix D** (The boring logs for MW-1, MW-2, and MW-5 could not be located).

Overburden at the Site was previously described as approximately 2 feet (ft) of fill material (fine grained silt and clays) overlaying native soils (clayey silts and silts with lesser and varying amounts of sands and gravel). With the soil removal interim remedial measure (IRM), the central portion of the Site now consists of approximately four ft of crushed stone, underlain by geotextile fabric, and then washed stone to the top of bedrock. Bedrock was generally encountered at depths ranging from approximately 9 to 12 ft below ground surface (bgs) across the central portion of the Site in the vicinity of the IRM, as well as in the southern portion of the Site. There is an apparent bedrock depression on the northern portion of the Site, with bedrock encountered at depths as deep as 21 ft bgs (MW-101B; BR-1 was drilled to 20 ft bgs with no bedrock encountered).

Bedrock underlying the Site was described as the Upper Silurian Lockport Dolomite Formation (potentially of the Guelph Dolomite formation). The Lockport Dolomite is gray dolomitic limestone, which is hard and fine-grained with horizontal to low angle fractures. The upper five ft of the Lockport Dolomite was described as fair quality (GZA, 2010).

2.2.3 Hydrogeology

A groundwater contour map presenting June 2024 data is shown in **Figure 2.3**. Groundwater elevation data for both June and December 2024 is provided in **Table 2.1**. Groundwater monitoring well construction logs are provided in **Appendix D** (the construction logs for MW-2 and MW-5 could not be located).

The groundwater below the Site is present in overburden and varies between approximately four to eight ft bgs, with groundwater elevations typically around 615 to 618 ft above mean sea level. Overburden groundwater generally flows to the west and northwest from the Site.

The average hydraulic conductivity estimated by GZA was 0.29 ft per day and the average overburden groundwater velocity at the Site was estimated at 10.7 ft per year (GZA, 2010).

Bedrock groundwater is also interpreted to flow to the west and northwest.

2.3 Investigation and Remedial History

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below are provided in **Section 8.0 – References**.

Documentation indicated that Peters Dry Cleaning operated as a dry cleaning facility from the late 1930s/early 1940s until approximately 2010. Previous reports reviewed and previous sampling data indicate that both Stoddard solvent and tetrachloroethene (PCE) were used as dry-cleaning solvents. Prior to its use as a dry cleaner, the facility was reportedly used as a clothing tailor shop. The Site facility was heated with heating oil prior to its conversion to natural gas in the early 1970's (GZA, 2010).

Several investigations and remedial actions have been conducted at the Site, including:

- GZA, 2004; Phase II Environmental Site Investigation (also referenced as Phase II Environmental Site Assessment [ESA]), Peters Dry Cleaners; Prepared by GZA GeoEnvironmental of New York for Earl, Delange, May, Seaman, Jones, Hogan and Brooks, LLP; August 8, 2004.
- GZA, 2005; Above Ground and Underground Storage Tank Closure Report, Peters Dry Cleaners; Prepared by GZA GeoEnvironmental of New York for

Earl, Delange, May, Seaman, Jones, Hogan and Brooks, LLP; June 2005.

- GZA, 2010; Draft Site Investigation and Alternatives Assessment Report (SI/AA), Brownfield Cleanup Program (BCP), Peters Dry Cleaners; Prepared by GZA GeoEnvironmental of New York; December 2010 (submitted to the NYSDEC in the spring of 2011).
- MACTEC, 2015; Remedial Investigation/Feasibility Study Report (RI/FS), Peters Dry Cleaning. Prepared by MACTEC Engineering and Consulting, PC; February 2015.
- MACTEC, 2021; Revised Final Pre-Design Groundwater Sampling and Evaluation, 316 Willow Street, Lockport, New York, Peters Dry Cleaning Site; December 23, 2021.
- EEG, 2025; Biological Amendment Injection Report, Peters Dry Cleaning Site, Completed by Earth Environment Engineering and Geology, PC; January 7, 2025.

The GZA Phase II ESA conducted in 2004 identified petroleum and chlorinated solvent contamination in the soil and groundwater at the Site. Two storage tanks were also identified during the ESA. Based on the findings of the Phase II ESA, NYSDEC assigned Spill No. 0475193 to the Site. The two tanks consisted of a 1,000-gallon above ground storage tank (AST) and an abandoned 6,000-gallon underground storage tank (UST) (located approximately 15 ft south of MW-101 and outside the former building). Both tanks were used to store heating oil prior to the facility being connected with natural gas in the early 1970's. In April 2005, the AST and UST were removed in accordance with a NYSDEC approved Work Plan and documented in the June 2005 Closure Report. Approximately two cubic yards of petroleum contaminated soil was removed from the south side of the UST excavation (GZA, 2005). The June 2005 Closure Report indicated that results of the sidewall confirmation samples were below the NYSDEC guideline values and that no additional remedial work was needed (GZA, 2005). In addition, approximately 30 tons of chlorinated solvent and petroleum contaminated soil was removed from the approximate middle of the Site and disposed of as hazardous waste as part of an additional excavation activity in 2005 (GZA, 2010). The excavation was stopped upon the discovery of the PCE contamination.

The owner of the property submitted a BCP Application, dated November 22, 2006 to the NYSDEC. The Peters Dry Cleaning BCP Application was approved by NYSDEC on February 21, 2007.

As part of the BCP, GZA conducted the SI/AA from 2007 to 2010. The SI included soil, groundwater, and soil vapor/indoor air sampling. The objective of the SI/AA was to define the extent of on-site and off-site contamination attributable to Site activities and to complete a remedial action assessment to identify a remedial strategy for the Site. A soil vapor intrusion (SVI) investigation was also performed at the Site and three surrounding residents (one east of the Site and two west of the Site). SVI findings resulted in the installation of two sub-slab depressurization systems (SSDSs) in December 2009; one at the Site and one at an adjacent residence to the west. The selected remedial action for the Site in the SI/AA Report was in-situ chemical oxidation for on-site soil and groundwater, and monitored natural attenuation (MNA) for off-site groundwater.

On July 5, 2011, the owner of the property (BCP applicant) informed the NYSDEC that due to financial limitations, they were requesting that the Brownfield Cleanup Agreement be terminated. As a result, the NYSDEC took over investigation and cleanup activities under the State Superfund Program.

The Site building was removed in October 2013 by the NYSDEC in preparation for a RI/FS and remedial actions.

An RI/FS was conducted by MACTEC from 2013-2014 after the demolition of the on-site building, and an RI/FS report was written in February 2015 (MACTEC, 2015). The purpose of this investigation was to develop remedial action objectives (RAOs) and to more fully characterize the site. The RI/FS included a site survey, handling of investigation derived waste, background soil sampling, on-site soil and groundwater sampling for volatile organic compounds (VOCs), and an SSDS performance evaluation. The SSDS at the adjacent residence was also evaluated on March 23, 2016 and April 3, 2017.

A soil removal IRM was conducted in 2014 as part of the RI project (MACTEC, 2015). The former building foundation, 6 USTs, 462 tons of hazardous waste soil, and 3985 tons of non-hazardous waste soil were removed from the site with the objective of meeting residential use soil cleanup objectives (SCOs) for VOCs. Excavation was completed to bedrock, located 9 to 12 ft below grade in the area excavated. Washed stone was used up to 4 ft below grade, filter fabric was placed above that, and a mix of crushed stone and clean topsoil were used for backfilling to grade.

The selected remedy following the RI and IRM, as detailed in the Record of Decision (ROD), was in-situ enhanced biodegradation (NYSDEC, 2015). This remedy also included ICs, long-term monitoring via MNA, and annual reporting.

A groundwater sampling round was conducted in April 2021 to aid in the design of bioamendment injections (MACTEC, 2021).

Biological amendment injections were conducted in September 2023, and included the injection of approximately 2578 gallons of a mixture of 5.5% volume of Regenesis 3D Microemulsion and water, as well as approximately 18 liters of Bio-Dechlor INOCULUM Plus (microorganism culture). The response to the injection round was monitored through a baseline test and three rounds of post injection tests for VOCs, MNA parameters, and microbes conducted in December 2023, March 2024, and June 2024. The test results indicated a downward trend in total VOC concentrations and a breakdown of PCE into cis-1,2-DCE and vinyl chloride (EEEG, 2025). Following the post injection monitoring rounds a comprehensive semi-annual sampling event was conducted in December 2024. The results of the December 2024 sampling, which are the most recent results as of the writing of this report, are presented on **Figure 2.4** and in **Table 2.2**.

2.4 Remedial Action Objectives

The RAOs for the Site as listed in the ROD dated March 30, 2015 are as follows:

2.4.1 Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

2.4.2 Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

2.4.3 Soil Vapor

RAOs for Public Health Protection

Mitigate impacts to public health resulting from existing, or the potential for, SVI into buildings at a site.

2.5 Remaining Contamination

2.5.1 Soil

To comply with current site use, the soil removal IRM targeted the removal of soil with contaminant concentrations exceeding SCOs for residential use (MACTEC, 2015). The primary contaminants of concern were petroleum related and chlorinated VOCs. The excavation was completed to bedrock, which varied in depth from nine to 12 ft bgs, with the top of bedrock scraped clean with an excavator bucket. Bottom sample ESB-02 was the only confirmation sample taken that had an exceedance of Residential Use SCOs (PCE detection of 15 mg/kg compared to a residential SCO of 5.5 mg/kg). ESB-02 was collected in the vicinity of MW-100B from residual soil on top of bedrock (approximately 11 ft below grade) that was remaining after the bedrock was scraped with an excavator. Because this sample represents an incidental amount of residual soil that is inaccessible due to depth and backfill of 11 ft of stone, no residential use restrictions are deemed necessary. Although the remaining confirmation samples met the residential use SCOs, four of the samples exceeded SCOs for protection of groundwater based on detections of 1,2,4-Trimethylbenzene, Cis-1,2-Dichloroethene, and/or vinyl chloride. Two of these four samples were also collected from residual soil located on top of bedrock that could not be removed by excavation. The NYSDEC concluded in the ROD that the soil at the Site substantially met the protection of groundwater and unrestricted use SCOs.

Table 2.3 and **Figure 2.4** summarize the results of all confirmation soil samples collected during the 2014 soil removal IRM, including soil samples collected that exceed the Unrestricted Use SCOs and Residential Use SCOs at the site after completion of the soil removal IRM. Due to detections of contaminants in soil above unrestricted use SCOs, the EWP provided in **Appendix E** should be followed when doing any ground intrusive work on the Site to prevent unwanted reuse of potentially contaminated soil.

2.5.2 Groundwater

Table 2.2 and **Figure 2.4** summarize the results of all samples of groundwater from the December 2024 sampling round that exceed the standards, criteria, and guidelines (SCGs) after completion of the remedial action. Remaining overburden contamination exceeding SCGs consists of chlorinated compounds, with the select VOCs displayed on **Figure 2.4** consisting of the sum of tetrachloroethene and its degradation products, trichloroethene (TCE), cis-1,2-dichloroethene, and vinyl chloride. Most remaining groundwater contamination as seen on **Figure 2.4** is located on the west and north sides of the IRM excavation area, and the highest levels detected of the sum of the select chlorinated compounds listed above were at MW-101 (1936.6 ug/L VOCs), SP-05 (342 ug/L VOCs) and MW-5 (84.6 ug/L VOCs). Several petroleum related VOCs were also detected in bedrock groundwater, with detected concentrations of nine petroleum related VOCs exceeding SCGs in a bedrock groundwater sample from MW-100B, located within the IRM soil excavation and in the vicinity of the former building; the highest detections were for 1,2,4-trimethylbenzene (270 µg/L).

2.5.3 Soil Vapor

Although chlorinated compounds are likely still present in soil vapor as a result of continued groundwater contamination, soil vapor sampling at the Site has not been conducted post remedial actions and current concentrations are unknown. SVI sampling was conducted in the on-site building and three off-site residential properties in 2009 and 2010. VOCs present in soil vapor included chlorinated compounds (i.e, PCE, TCE, cis-1,2-DCE, and vinyl chloride) and petroleum related compounds (e.g., benzene, ethylbenzene,

toluene, xylene, 1,2,4-trimethylbenzene, and heptane). Due to the potential for vapor intrusion, SSDSs were installed in the Site building (building no longer present) and the building adjoining the Site to the west. No other issues resulting from soil vapors were identified. SVI sampling was also conducted at four off-site nearby residential properties in April 2025. Based on the analytical results and comparison to the New York State Department of Health (NYSDOH) SVI decision matrices (NYSDOH, 2006), no further action appears warranted in the four properties sampled and the NYSDOH did not require any additional SVI sampling.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

Since remaining contamination exists at the site, ICs and ECs are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC project manager.

This plan provides:

- A description of all IC/ECs on the site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the environmental easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the EWP (as provided in **Appendix E**) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the site remedy, as determined by the NYSDEC project manager.

3.2 Institutional Controls

A series of ICs is required by the ROD to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to residential, commercial, or industrial uses.

Adherence to these ICs on the site is required by the Environmental Easement and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundaries are the site property boundaries shown on **Figure 1.2**. These ICs (per the ROD and Environmental Easement) are:

- The property may be used for residential, restricted residential, commercial, or industrial use as described in 6 NYCRR Part 375-1.8(g)(2), although land use is subject to local zoning laws;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Niagara County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;

- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement;
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on **Figure 1.2**, and any potential impacts that are identified must be monitored or mitigated;
- The Site shall not be used for farming, raising livestock or producing animal products for human consumption; and

3.3 Engineering Controls

3.3.1 Sub-Slab Depressurization System

Exposure to contaminated indoor air resulting from vapor intrusion has been mitigated with the installation of an SSDS at a residential property to the west of the site. The system consists of one or more sub-slab suction points and an exterior mounted fan. The fan runs continuously and does not require routine maintenance.

The off-site residential SSD/ventilation system is being monitored by and maintained by the NYSDEC. To monitor this system, the NYSDEC sends an annual letter to the owner or tenant of the property to remind them to check to see the fan is operational, to confirm that it is drawing a vacuum, and to report any issue to the NYSDEC so they can take care of any maintenance or repairs needed. In addition, during annual Site inspections, the exterior of the off-site SSDS will be evaluated to confirm integrity and operation (i.e., evaluate piping and noise level of fan). The interior components of the SSDS, including piping, manometer, and integrity of building floor will be evaluated every five years. The procedures for operating and maintaining the SSDSs are documented in the Operation and Maintenance Plan (**Section 5.0** of this SMP).

3.3.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the RAOs identified by the decision document. The

framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10. Unless waived by the NYSDEC, confirmation samples of applicable environmental media are required before terminating any remedial actions at the site. Confirmation samples require Category B deliverables and a Data Usability Summary Report.

As discussed below, the NYSDEC may approve termination of a groundwater monitoring program. If approved, all site-related monitoring wells will be decommissioned as per the NYSDEC CP-43 policy.

Any needed site restoration activities, such as asphalt patching or vegetation restoration will be conducted by the NYSDEC. Also, the NYSDEC will ensure that no ongoing erosion is occurring on the site.

3.3.3 Sub-Slab Depressurization System

The SSDS installed at the adjacent residence will not be discontinued unless prior written approval is granted by the NYSDEC and the NYSDOH project managers. If monitoring data indicates that the SSDS may no longer be required, a work plan to discontinue the SSDS will be submitted by the property owner to the NYSDEC and NYSDOH project managers. The work plan must include SVI sampling to verify that the SSDS is no longer needed and must comply with the NYSDOH SVI Guidance.

If the NYSDEC project manager approves termination of operation and maintenance of an SSDS, the remedial party will notify the property owner and ask whether the property owner wants to keep the SSDS. If the property owner elects to keep the system, the property owner will be responsible for the operation and maintenance of the system going forward. If the property owner wants the system removed, the remedial party will remove and dispose of the system and repair any parts of the structure that were altered or modified by the SSDS, such as holes in the basement floor or walls.

3.3.4 Monitoring Wells associated with Monitored Natural Attenuation

Groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC project manager in consultation with NYSDOH project manager, until residual groundwater concentrations are found to be consistently below ambient water quality standards, the site SCGs, or have become asymptotic at an acceptable level over an extended period. In the event that monitoring data indicates that monitoring for natural attenuation may no longer be required, a proposal to discontinue the monitoring will be submitted by the remedial party. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC project manager. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC, additional source removal, treatment and/or control measures will be evaluated.

4.0 MONITORING AND SAMPLING PLAN

4.1 General

This Monitoring and Sampling Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring and Sampling Plan may only be revised with the approval of the NYSDEC project manager. Details regarding the sampling procedures, data quality usability objectives, analytical methods, etc. for all samples collected as part of site management for the site are included in the Quality Assurance Program Plan (QAPP) and Program Field Activities Plan (FAP) (MACTEC, 2020).

This Monitoring and Sampling Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC SCGs, particularly groundwater standards and Part 375 SCOs for soil; and
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;

To adequately address these issues, this Monitoring and Sampling Plan provides information on:

- Sampling locations, protocol and frequency;
- Analytical sampling program requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Reporting requirements are provided in **Section 7.0** of this SMP.

4.2 Site – wide Inspection

Site-wide inspections will be performed at a minimum of once per year. These periodic inspections must be conducted when the ground surface is visible (i.e. no snow cover). Site-wide inspections will be performed by a qualified environmental professional as defined in 6 NYCRR Part 375. Modification to the frequency or duration of the inspections will require approval from the NYSDEC project manager. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. During these inspections, an inspection form will be completed as provided in **Appendix F** – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- General site conditions at the time of the inspection;
- Whether stormwater management systems, such as basins and outfalls, are working as designed;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that site records are up to date.

Inspections of all remedial components installed at the site will be conducted. A comprehensive site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report (PRR). The inspections will determine and document the following:

- If these controls continue to be protective of human health and the environment;

- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If site records are complete and up to date.

Reporting requirements are outlined in **Section 7.0** of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the site, verbal notice to the NYSDEC project manager must be given by noon of the following day. In addition, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the IC/ECs implemented at the site by a qualified environmental professional, as defined in 6 NYCCR Part 375. Written confirmation must be provided to the NYSDEC project manager within 7 days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public. The remedial party will submit follow-up status reports to the NYSDEC within 45 days of the event on actions taken to respond to any emergency event requiring ongoing responsive action, describing and documenting actions taken to restore the effectiveness of the ECs.

The remedial party will conduct exterior inspections of all SSDSs annually and perform comprehensive inspections every five years. Exterior inspections will include: confirming that the fan is running correctly, determining whether there is damage to the stack or other exterior system components, and determining whether there have been structural changes, such as an addition to the structure. Comprehensive inspections include all of the activities required in the exterior inspection and an interior inspection, which includes: confirming a pressure differential on the manometer, inspecting the interior components for damage, recording vacuum readings from sub-slab vacuum monitoring points (if installed), and inspecting the basement area for cracks in the basement floors and walls that may have developed since the SSDS was installed. The remedial party will notify the DEC project manager about any problems within three days of inspections. Inspection

reports will be emailed to the DEC Project Manager and included in the next PRR. Any needed repairs will be made promptly according to the procedures in the Operation and Maintenance Plan (**Section 5.0**).

4.3 Post-Remediation Media Monitoring and Sampling

The effectiveness of the remedial actions previously implemented at the Site will be monitored through the collection and evaluation of groundwater quality within and hydraulically downgradient of the previous source area excavation and in-situ biological amendment injection areas. Samples shall be collected from the groundwater monitoring wells on a routine basis. Sampling locations, required analytical parameters and schedule are provided in **Table 4.1** – Post Remediation Sampling Requirements and Schedule. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager. Groundwater samples will be analyzed for the following analysis (also listed in **Table 4.1**):

- VOCs by Method 8260 – MW-1, MW-2, MW-2B, MW-5, BR-01, BR-02, SP-01, SP-02, SP-03, SP-05, SP-06, SP-07, SP-08, SP-13, SP-17, SP-19, SP-22, DP-07, DP-24, DP-25, MW-100, MW-100B, MW-101, MW-101B, MWPS-1, MWPS-2, and MWPS-3
- MNA parameters – MW-2, MW-5, BR-01, SP-05, SP-07, MW-101, MW-101B, MWPS-1, MWPS-2, and MWPS-3:
 - o Dissolved Gases (methane, ethane, ethene) by Method RSK-175
 - o Iron and Manganese by Method 6010
 - o Chloride by Method SM4500
 - o Alkalinity by Method SM2320
 - o Sulfate by Method 300.0
 - o Sulfide by Method SM4500
 - o Nitrate by Method 300.0
 - o Total Organic Carbon by Method 415.1
 - o Field Parameters - pH, ORP, DO, Turbidity, Conductivity

Detailed sample collection and analytical procedures and protocols are provided in the QAPP/FAP (MACTEC, 2020).

4.3.1 Groundwater Sampling

Groundwater monitoring will be performed biannually to assess the performance of the remedy. If additional bioremediation is conducted, the list of wells below and the sampling frequency could change. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager. Prior to sampling a synoptic round of groundwater elevations will be collected. Monitoring wells will be sampled following low flow sampling procedures; if insufficient flow, then wells will be purged dry and the recharge water will be sampled. Purge water will be treated through granular activated carbon and discharged to the ground surface. Purge water for wells that have historically had results below SCGs can be discharged directly to the ground surface. The following wells were previously found to have no detections above Class GA standards: DP-24, DP-25, MW-1, MW-101B, SP-01, SP-02, SP-07, SP-13 and SP-22. Unless olfactory or visual evidence (i.e., sheen) indicated contamination is present, purge water from the preceding wells may be discharged to the ground surface in the vicinity of the wells sampled.

The network of monitoring wells has been installed to monitor upgradient, on-site and downgradient groundwater conditions at the site. For the purposes of monitored natural attenuation, annual sampling will include testing for VOCs, dechlorinating microbes, and VOC parameters.

The monitoring well network includes five sentinel wells that monitor downgradient plume migration. Sentinel wells are typically uncontaminated wells located directly downgradient of the plume and upgradient of sensitive receptors. Water in the vicinity and downgradient of the Site is not used for drinking water purposes. North of the Site (on the north side of Willow Street), in SP-01, SP-02 and SP-13, concentrations of VOCs in groundwater were non-detect for site related VOCs in the December 2024 groundwater sampling round, and west of the site, at DP-24 and DP-25, concentrations of

cis-1,2-DCE (the only compound detected in these wells) were less than 2 µg/L (below SCGs). These five wells are located downgradient or on the downgradient edge of the contamination plume and are considered sentinel wells.

Table 4.2 summarizes the wells' identification numbers, as well as the purpose, location, depths, diameter and screened intervals of the wells. As part of the groundwater monitoring, 2 upgradient wells (one is on-site), 13 additional on-site wells and 12 downgradient wells are sampled to evaluate the effectiveness of the remedial system. The remedial party will measure depth to the water table for each monitoring well in the network before sampling.

Monitoring wells are shown on **Figure 1.2**. Monitoring well construction logs are included in **Appendix D** of this document.

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC project manager will be notified prior to any repair or decommissioning of any monitoring well for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent PRRWell decommissioning without replacement will be done only with the prior approval of the NYSDEC project manager. Well abandonment will be performed in accordance with NYSDEC's guidance entitled "CP-43: Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be replaced in kind in the nearest available location, unless otherwise approved by the NYSDEC project manager.

The sampling frequency may only be modified with the approval of the NYSDEC project manager. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC project manager.

Deliverables for the groundwater monitoring program are specified in **Section 7.0 – Reporting Requirements**.

4.3.2 Monitoring and Sampling Protocol

All sampling activities will be recorded in a field book and associated log as provided in **Appendix F – Site Management Forms**. Other observations (e.g., groundwater monitoring well integrity) will be noted on the sampling log. The sampling log will serve as the inspection form for the monitoring network. Additional detail regarding monitoring and sampling protocols are provided in QAPP/FAP (MACTEC, 2020). Relevant Standard Operating Procedures from the QAPP for the groundwater sampling, which include groundwater sampling logs, are included in **Appendix G**. Monitoring will also be conducted in accordance with the site-specific Health and Safety Plan (**Appendix H**).

5.0 OPERATION AND MAINTENANCE PLAN

5.1 General

This Operation and Maintenance Plan provides a brief description of the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the site. This Operation and Maintenance Plan:

- Includes the procedures necessary to allow individuals unfamiliar with the site to operate and maintain the SSDS;
- Will be updated periodically to reflect changes in site conditions or the manner in which the SSDS is operated and maintained.

This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of this SMP.

The only mechanical system at the Site is the off-site residential SSD/ventilation system at the adjacent property, which is being monitored by and maintained by the NYSDEC. To monitor this system, the NYSDEC sends an annual letter to the owner or tenant of the property to remind them to check to see the fan is operational, to confirm that it is drawing a vacuum, and to report any issue to the NYSDEC so they can take care of any maintenance or repairs needed. In addition, the exterior components of the SSDS will be monitored annually and the interior portions of the system will be monitored every five years during the Site inspections to evaluate integrity and operation of the system. The sections below are included as part of this SMP for informational purposes as per the ROD.

5.2 Remedial System (or other Engineering Control) Performance Criteria

The SSDS installed at the adjacent property to the west of the Site is designed to create a minimum vacuum below the entire building footprint. The vacuum is provided by a fan connected to a 3-inch schedule 40 PVC pipe to a roof exhaust on the west side of the building. There is an electrical connection and switch on the outside of the building, 2 suction points (one near where the pipe enters the building and one toward the east end of

the Site building), and a vacuum indicator on the pipe.

The fan should be in continuous operation, and should not be making any unusual noises. The liquid level in the vacuum gauge should not move significantly from the position of the mark. If the system is determined to be non-operational by the property owner, or during routine inspections, the NYSDEC will be contacted for maintenance (If the property owner identifies an issue, they can contact: Mohamed Sahraoui of the NYSDEC at tel. 518-402-9802).

5.3 Operation and Maintenance of the SSDS

The following sections provide a description of the operations and maintenance of the SSDS.

5.3.1 System Start-Up and Testing

The SSDS is designed to run continuously. If the system is shut down, it should be turned back on and the vacuum measurement on the liquid manometer observed. If the vacuum is below original design parameters, the building floor should be evaluated for new/unsealed cracks in the concrete or damaged pipes that could be short circuiting the system. If the floor is sealed and the system components are in good repair, additional pressure field testing can be conducted across the basement floor to ensure the vacuum created meets design specifications.

The system testing described above will be conducted if, in the course of the SSDS lifetime, the system goes down or significant changes are made to the system and the system must be restarted.

5.3.2 Routine System Operation and Maintenance

The SSDS is designed to run continuously with little to no maintenance needs. The system should be evaluated at a minimum annually by the property owner to:

- Conduct a visual inspection of the complete System (e.g., vent fans, piping, warning devices, labeling on system, etc.) for condition and proper operation;

- Conduct an inspection of the vacuum measurements on the liquid manometer to ensure it is within design criteria;
- Conduct an inspection of all surfaces to which vacuum is applied for new/unsealed cracks/joints; and
- Inspect the exhaust or discharge point to verify that no air intakes have been located nearby.

5.3.3 Non-Routine Operation and Maintenance

Non routine maintenance will be conducted in the event the system or system components are broken or damaged. If the SSDS fan is found to be non-functioning, it can be replaced by the installer without removing the rest of the system.

5.3.4 System Monitoring Devices and Alarms

As stated above, the SSDS is installed with a liquid manometer to gauge the vacuum created by the fan. If, upon inspection, there is no vacuum shown on the manometer, applicable maintenance and repairs will be conducted, and the SSDS will be restarted. Because the system is monitored by the individual property owner, inspections and operational problems will not be noted in the PRRs.

5.3.5 Fire Safety

The SSDS fan is located on the exterior of the Site building and is connected to its own circuit breaker. An electrical fault will trigger the breaker and stop power to the fan to prevent an electrical fire. The fan and visible wiring will be inspected annually by the property owner to ensure it is in good working condition and no loose/worn wires are present.

5.4 Operation and Maintenance of the Site Monitoring Wells

The following sections provide a description of the operations and maintenance of the Site monitoring wells. Monitoring well diagrams are included in **Appendix D**.

5.4.1 Monitoring Well Inspection

During groundwater monitoring activities monitoring wells will be inspected for:

- Well accessibility;
- Casing integrity (e.g., cracked concrete, missing bolts, etc.);
- J-plug present and in good condition;
- Integrity of well riser (e.g., riser not bent and accessible with sampling equipment);
- Sedimentation of screen.

Inspection observations will be documented on the groundwater sampling forms and noted in the PRR.

5.4.2 Monitoring Well Maintenance

If monitoring well inspection indicates repairs are necessary, actions will be taken that may include:

- Replacement of broken parts (e.g., bolts, J-plugs, etc.);
- Casing repairs (e.g., replace road box);
- Well redevelopment;
- Well replacement;
- Well abandonment (with concurrence from NYSDEC).

Well repair activities will be documented in field forms and PRRs.

6.0 PERIODIC ASSESSMENTS/EVALUATIONS

6.1 Climate Change Vulnerability Assessment

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climactic change and instability, have the potential to significantly impact the performance, effectiveness and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

This section provides a current vulnerability assessment that evaluates the vulnerability of the site and/or engineering controls to severe storms/weather events and associated flooding. This section also identifies vulnerability assessment updates that will be conducted for the site in PRRs.

Because the Site and surrounding area is fairly flat and the surrounding properties urbanized, the Site is considered fairly resilient to climate change. The site is also not located in an area mapped by the Federal Emergency Management Administration as prone to flooding during either 100- or 500-year events, and is also not prone to droughts. However, a vulnerability assessment will be conducted annually as part of the annual inspection. This assessment will include an evaluation of the following potential vulnerabilities:

- Site Drainage and Storm Water Management: The northern portion of the property is covered primarily with crusher run stone, with a small section of asphalt near Willow Street, and a small southern section is covered with grass. Average annual rainfall is 40.5”, and average annual snowfall is 94.7”. It is located approximately 625 ft above mean sea level and is relatively flat, and rainwater from the area that does not infiltrate into overburden drains into a storm water grate on Willow Street

which flows to the City of Lockport’s wastewater treatment plant. The nearest surface water to the Site is the Erie Canal, located approximately 3,000 ft west of the Site (MACTEC, 2015a).

- Erosion: Due to its flat topography and grass and pavement coverage, the site is not very susceptible to erosion. Nevertheless, the property boundaries should be inspected annually for signs of erosion due to rainfall.

6.2 Green Remediation Evaluation

NYSDEC’s DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. This section of the SMP provides a summary of green remediation evaluations to be completed for the site during site management and reported in PRRs.

- Land and/or ecosystems
 - No land or ecosystems will be disturbed during routine Site management activities.
- Water Usage
 - No water will be used during site management activities as the only active engineering control is the vapor mitigation system.
- Waste Generation
 - Purge water generated during groundwater sampling will be treated on-site through a portable granular activated carbon system and discharged to the surface.
- Energy Usage
 - Unlike a soil vapor extraction system, the SSDSs are designed to run with minimal energy usage while preventing contaminants from migrating into structures.
- Emissions
 - Trips to the Site for inspections and sampling will be combined with other activities when possible, to limit the emissions produced.
 - Vehicles will not be idled while not in use during site visits.

6.2.1 Timing of Green Remediation Evaluations

For major remedial system components, green remediation evaluations and corresponding modifications will be undertaken at any time that the NYSDEC project manager feels appropriate, (e.g. during significant maintenance events or in conjunction with storm recovery activities).

Modifications resulting from green remediation evaluations will be routinely implemented and scheduled to occur during planned/routine operation and maintenance activities after approval from the DER project manager. Reporting of these modifications will be presented in the PRR.

6.2.2 Remedial Systems

The only remedial system is the SSDS at the adjacent property. Remedial systems will be operated properly considering the current site conditions to conserve materials and resources to the greatest extent possible. The SSDS runs continuously, but uses minimal electricity.

6.2.3 Frequency of System Checks, Sampling and Other Periodic Activities

Transportation to and from the Site, use of consumables in relation to visiting the Site in order to conduct system checks and/or collect samples, and shipping samples to a laboratory for analyses have direct and/or inherent energy costs. The schedule and/or means of these periodic activities have been prepared so that these tasks can be accomplished in a manner that does not impact remedy protectiveness but reduces expenditure of energy or resources.

6.2.4 Metrics and Reporting

As discussed in **Section 7.0** and as shown in **Appendix F** – Site Management Forms, information on energy usage, solid waste generation, transportation and shipping, water usage and land use and ecosystems will be recorded to facilitate and document consistent implementation of green remediation during site management and to identify corresponding benefits. A set of metrics has been developed and will be evaluated over time to ensure that green remediation actions are achieving the desired results.

7.0 REPORTING REQUIREMENTS

7.1 Site Management Reports

All site management inspection, maintenance and monitoring events will be recorded on the appropriate site management forms provided in **Appendix F**. These forms are subject to NYSDEC revision. All site management inspection, maintenance, and monitoring events will be conducted by a qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of **Table 7.1** and summarized in the PPR.

Table 7.1: Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
Groundwater Monitoring and Inspection Report	Biannually
Periodic Review Report	Annually or as otherwise determined by the NYSDEC

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC project manager.

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;

- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Type of samples collected (e.g., groundwater, sub-slab vapor, indoor air, outdoor air);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the system;

- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

Non-routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link:

<http://www.dec.ny.gov/chemical/62440.html>.

7.2 Periodic Review Report

A PRR will be submitted to the NYSDEC project manager beginning sixteen (16) months after the COC is issued. After submittal of the initial PRR, the next PRR shall be submitted annually to the NYSDEC project manager or at another frequency as may be required by the NYSDEC project manager. In the event that the site is subdivided into

separate parcels with different ownership, a single PRR will be prepared that addresses the site described in **Appendix A -Environmental Easement**. The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also be incorporated into the PRR. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual site inspections, fire inspections and severe condition inspections, if applicable.
- Description of any change of use, import of materials, or excavation that occurred during the certifying period.
- All applicable site management forms and other records generated for the site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- Identification of any wastes generated during the reporting period, along with waste characterization data, manifests, and disposal documentation.
- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These tables and figures will include a presentation of past data as part of an evaluation of contaminant concentration trends, including but not limited to:

- Trend monitoring graphs that present groundwater contaminant levels from before the start of the remedy implementation to the most current sampling data;
 - A current plume map for sites with remaining groundwater contamination; and
 - A groundwater elevation contour map for each gauging event.
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuISTM database in accordance with the requirements found at this link: <http://www.dec.ny.gov/chemical/62440.html>.
 - A site evaluation, which includes the following:
 - The compliance of the remedy with the requirements of the site-specific ROD;
 - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
 - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring and Sampling Plan for the media being monitored;
 - Recommendations regarding any necessary changes to the remedy and/or Monitoring and Sampling Plan;
 - An update to the climate change vulnerability assessment if site or external conditions have changed since the previous assessment, and recommendations to address vulnerabilities.
 - A summary of the Green Remediation evaluation, including a quantitative and qualitative overview of a site's environmental impacts and

recommendations to improve the remedy's environmental footprint. The PRR will include the completed Summary of Green Remediation Metrics form provided in **Appendix F**.

- An evaluation of trends in contaminant levels in the affected media to determine if the remedy continues to be effective in achieving remedial goals as specified by the ROD; and
- The overall performance and effectiveness of the remedy.
- A performance summary for the SSDS will not be included since the system is being monitored by the property owner and maintained by the NYSDEC. To monitor these systems, the NYSDEC sends an annual letter to the owner or tenant of the property to remind them to check to see the fan is operational, to confirm that it is drawing a vacuum, and to report any issues to the NYSDEC so they can take care of any maintenance or repairs needed.

7.2.1 Certification of Institutional and Engineering Controls

Following the last inspection of the reporting period, a qualified environmental professional as defined in 6 NYCRR Part 375 or PE licensed to practice and registered in New York State will prepare, and include in the PRR, the following certification as per the requirements of NYSDEC DER-10:

“For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- *The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- *The IC and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*

- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the site is compliant with the SMP and environmental easement;*
- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program; and*
- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law. I am certifying as Remedial Party’s Designated Site Representative for the site.”

Certification of the SSDS, the only Engineering Control associated with the site, will be completed by the property owners for the property adjacent to the Site, where the system is installed.

7.3 Corrective Measures Work Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control or failure to conduct site management activities, a Corrective Measures Work Plan will be submitted to the NYSDEC project manager for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC project manager.

8.0 REFERENCES

6 NYCRR Part 375, Environmental Remediation Programs. December 14, 2006.

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MACTEC, 2015b. Soil Removal Interim Remedial Measure – Completion Report, Peters Dry Cleaning (NYSDEC Site 932128), MACTEC Engineering and Geology, P.C., Project No. 3612122244. February 2015.

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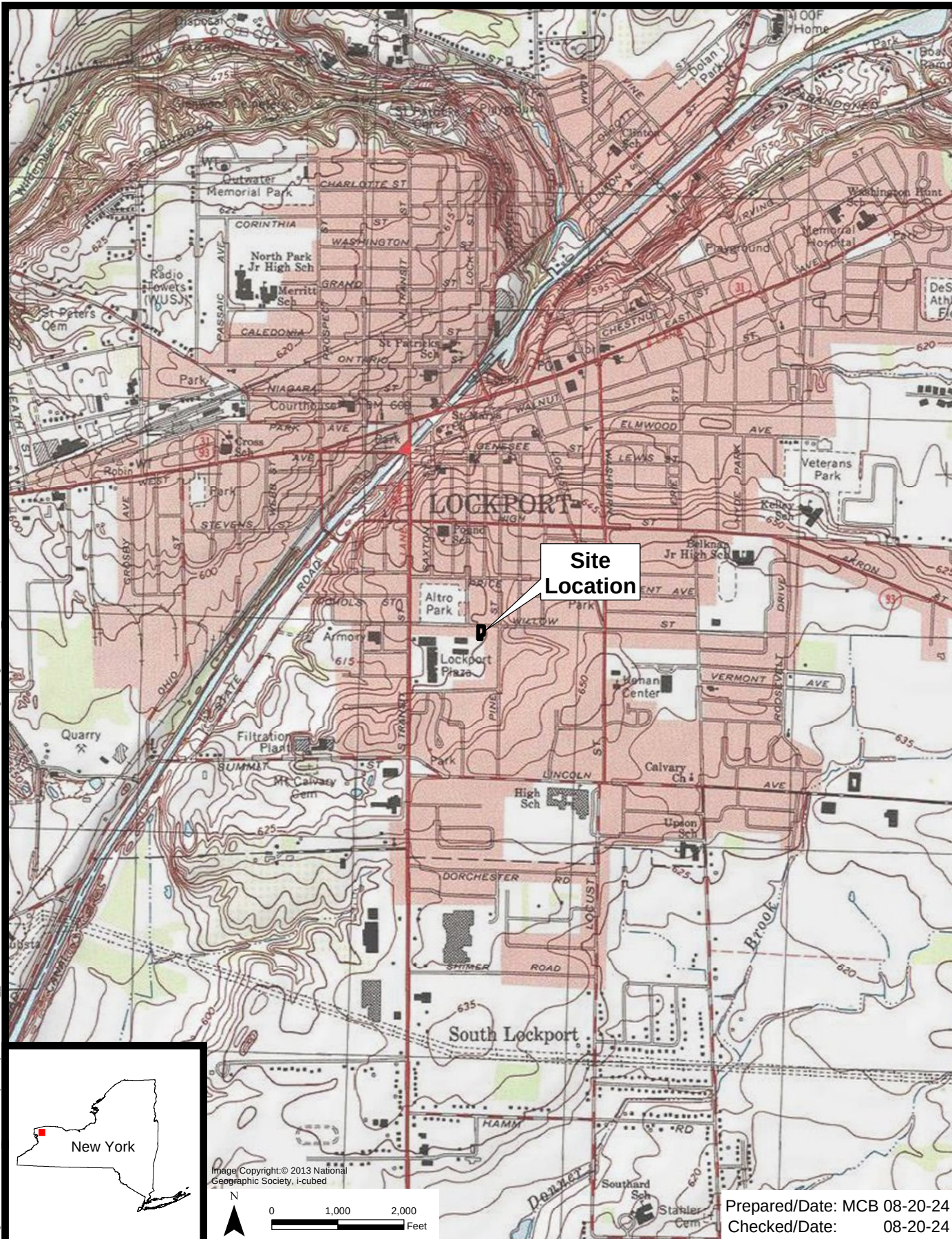
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NYSDEC, 2015. Record of Decision, Peters Dry Cleaning, Environmental Restoration Project, Lockport, Niagara County, Site No. 3612122244. March 2015.

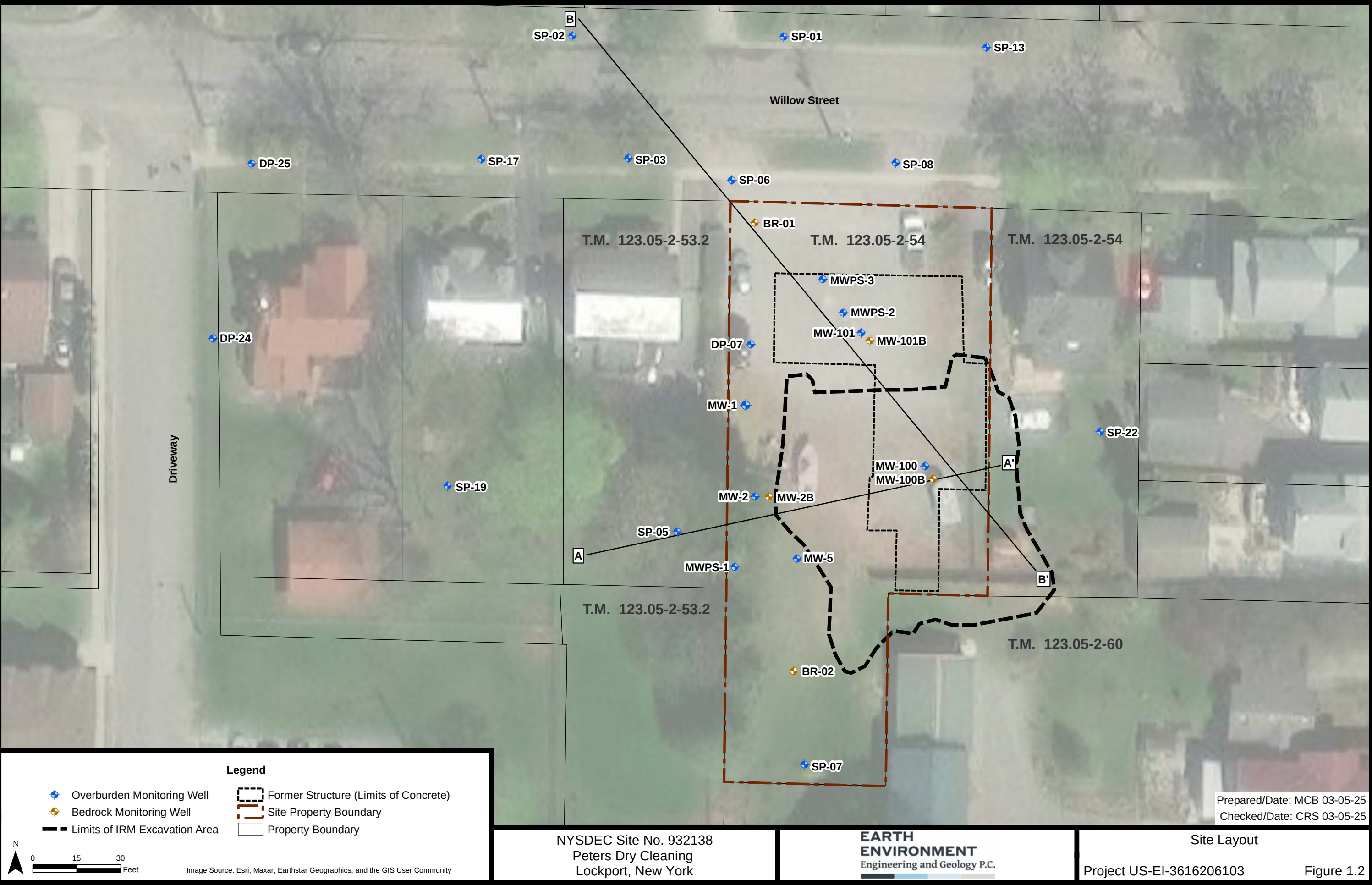
FIGURES



NYSDEC Site No. 932128
Peters Dry Cleaning
Lockport, New York

**EARTH
ENVIRONMENT**
Engineering and Geology P.C.

Site Location
Project US-EI-3616206103
Figure 1.1



Prepared/Date: MCB 03-05-25
Checked/Date: CRS 03-05-25

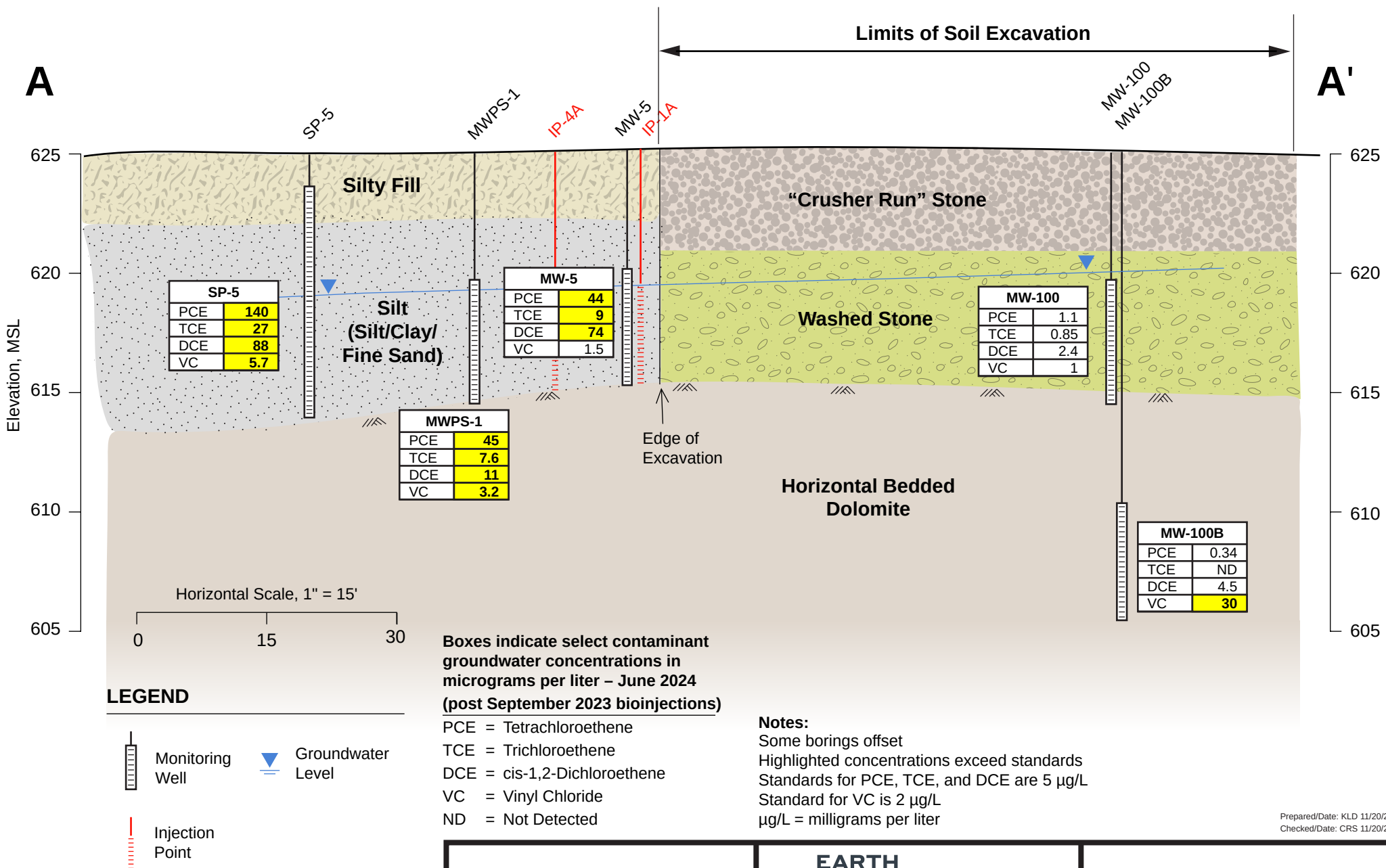
NYSDEC Site No. 932138
Peters Dry Cleaning
Lockport, New York

**EARTH
ENVIRONMENT**
Engineering and Geology P.C.

Site Layout

Project US-EI-3616206103

Figure 1.2

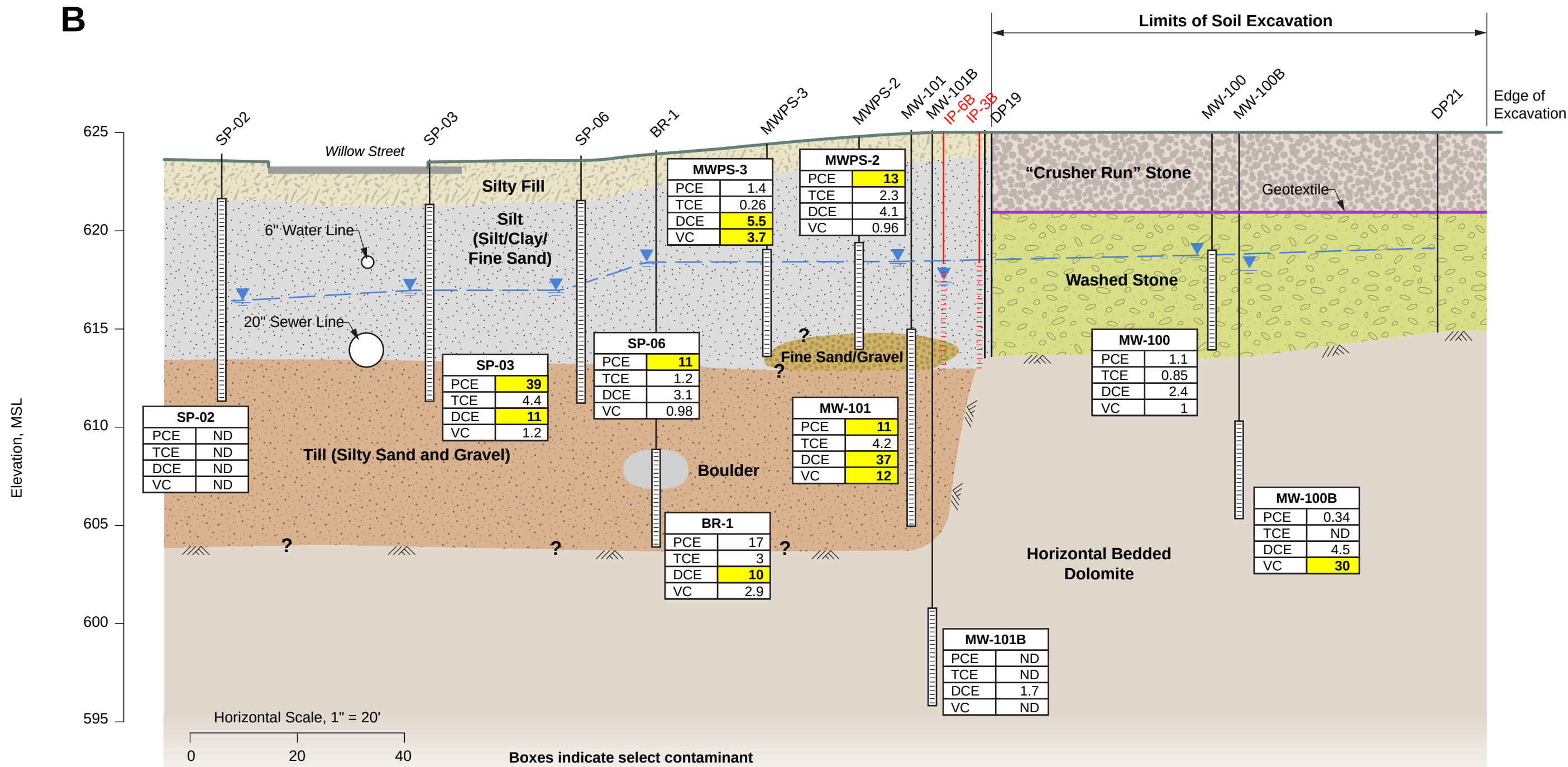


NYSDEC
Peters Dry Cleaning (Site No. 932128)
Lockport, NY

**EARTH
ENVIRONMENT**
Engineering and Geology P.C.

Geologic Cross Section A to A'
US-EI-3616206103
Figure 2.1

Prepared/Date: KLD 11/20/24
Checked/Date: CRS 11/20/24



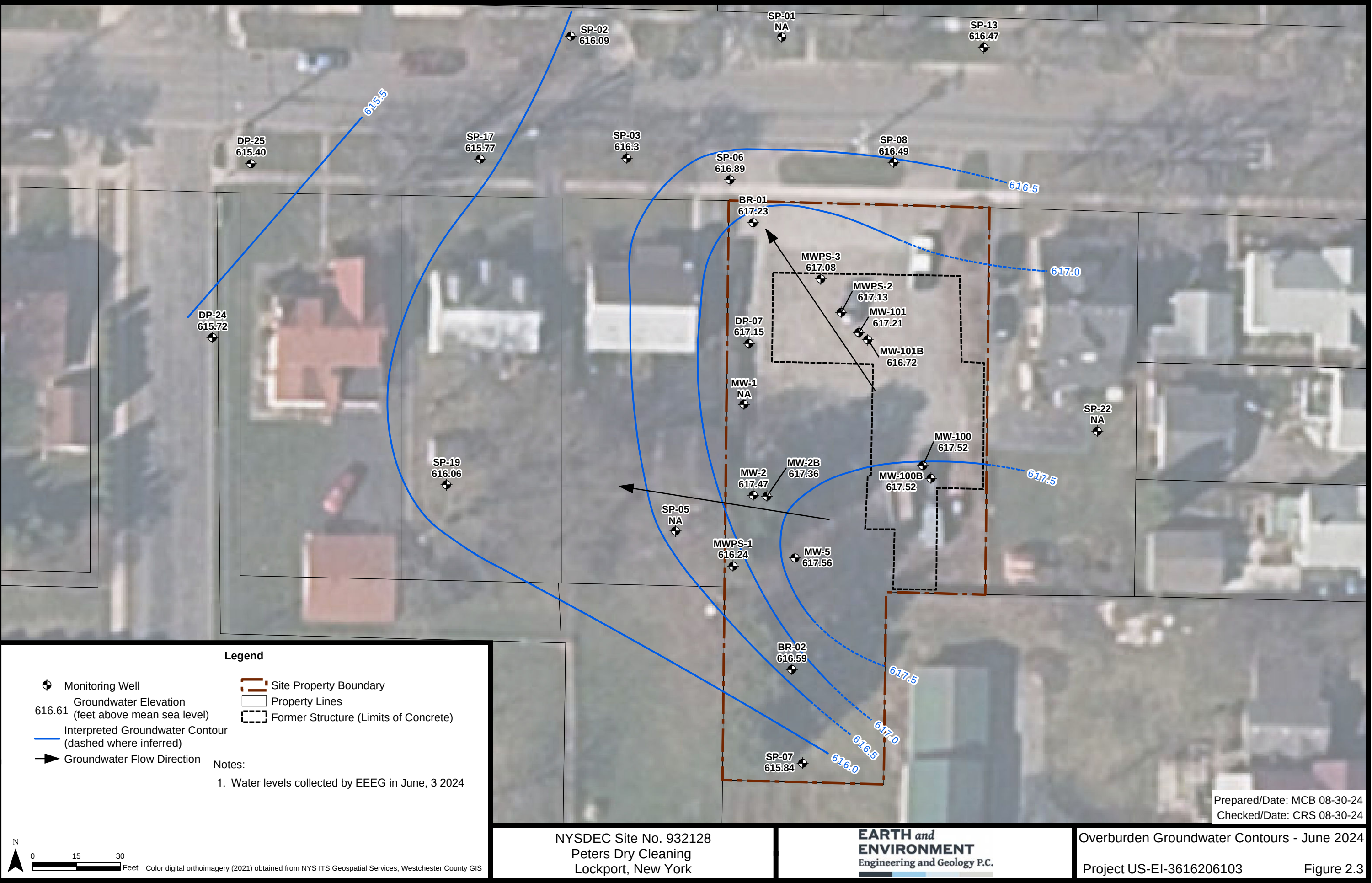
LEGEND

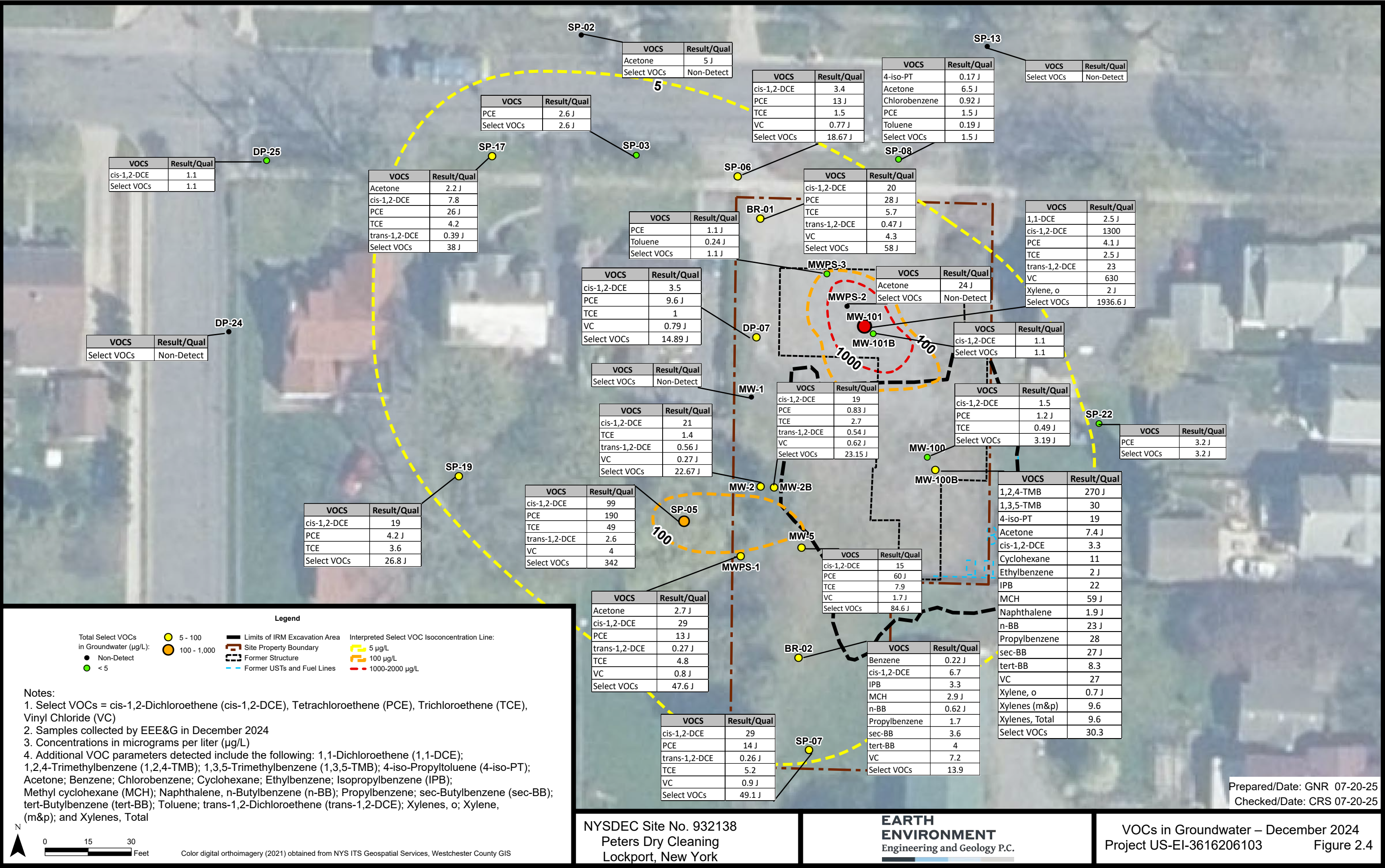
- Monitoring Well
- Groundwater Level
- Injection Point

Boxes indicate select contaminant groundwater concentrations in micrograms per liter – June 2024 (post September 2023 bioinjections)

PCE = Tetrachloroethene
TCE = Trichloroethene
DCE = cis-1,2-Dichloroethene
VC = Vinyl Chloride
ND = Not Detected

Notes:
Some borings offset
Highlighted concentrations exceed standards
Standards for PCE, TCE, and DCE are 5 µg/L
Standard for VC is 2 µg/L
µg/L = milligrams per liter





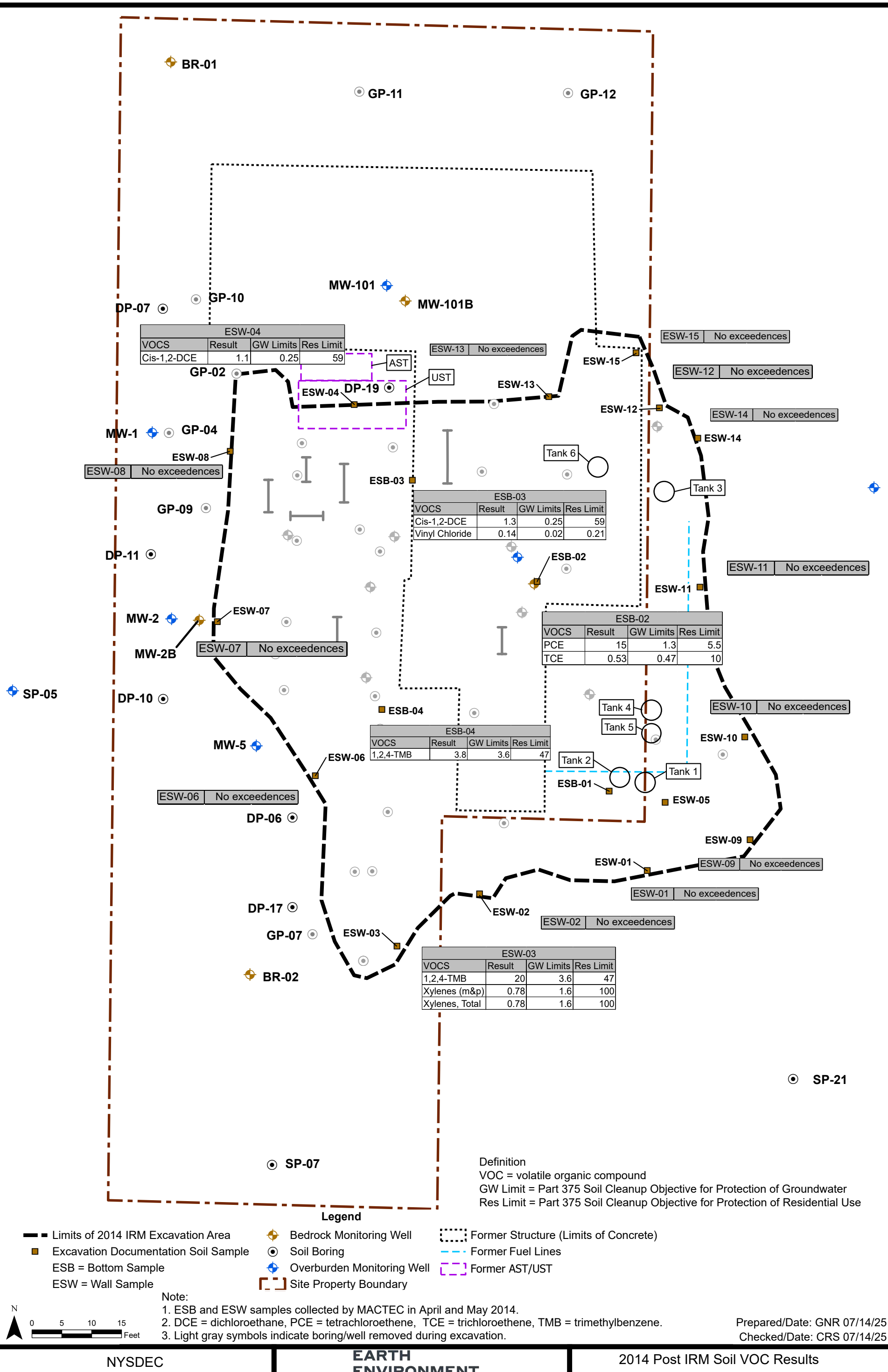
NYSDEC Site No. 932138
Peters Dry Cleaning
Lockport, New York

**EARTH
ENVIRONMENT**
Engineering and Geology P.C.

VOCs in Groundwater – December 2024
Project US-EI-3616206103 Figure 2.4

Prepared/Date: GNR 07-20-25
Checked/Date: CRS 07-20-25

Document: P:\Projects\NYSDEC\Peters Dry Cleaning\4.0_Deliverables\GIS\Map_documents\IRM_11x17P.mxd PDF: P:\Projects\NYSDEC\Contract 0007619\Projects\Peters Dry Cleaning\4.0_Deliverables\GIS\Map_documents\IRM_11x17P.mxd
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5/11/2015 1:58 PM michael.washburn



TABLES

Table 2.1 - Groundwater Elevation Data

Location	Ground Elevation	Riser Elevation	Well Depth	Well Type	DTW 6/2024	Groundwater Elevation 6/2024	DTW 12/2024	Groundwater Elevation 12/2024
BR-01	623.91	623.25	20.0	Overburden	6.02	617.2	7.01	616.24
BR-02	624.89	624.58	17.5	Bedrock	7.99	616.6	8.21	616.37
DP-07	624.03	623.46	11.9	Overburden	6.31	617.1	7.15	616.31
DP-24	621.23	620.89	18.0	Overburden	5.17	615.7	4.52	616.37
DP-25	621.32	621.17	16.0	Overburden	5.77	615.4	4.99	616.18
MW-1*	624.41	NA	9.0	Overburden	-	-	5.32	-
MW-2	624.32	624.00	14.0	Overburden	6.53	617.5	7.63	616.37
MW 2B	623.95	623.41	23.0	Bedrock	6.05	617.4	6.36	617.05
MW-5	624.43	624.16	10.0	Overburden	6.60	617.6	7.45	616.71
SP-01	625.28	625.23	12.0	Overburden	-	-	8.64	616.59
SP-02	623.60	623.58	12.0	Overburden	7.49	616.1	6.91	616.67
SP-03	623.31	623.25	12.0	Overburden	6.95	616.3	6.64	616.61
SP-05	624.13	623.98	12.0	Overburden	-	-	-	-
SP-06	623.55	623.43	12.0	Overburden	6.56	616.9	6.63	616.80
SP-07	625.47	625.30	11.0	Overburden	9.46	615.8	8.92	616.38
SP-08	625.03	624.94	15.0	Overburden	8.45	616.5	8.25	616.69
SP-13	626.57	626.42	15.0	Overburden	9.95	616.5	9.88	616.54
SP-17	622.35	621.96	15.0	Overburden	6.19	615.8	5.45	616.51
SP-19	622.88	622.76	15.0	Overburden	6.70	616.1	6.23	616.53
SP-22	628.00	NA	11.0	Overburden	8.26	NA	7.13	-
MW-100	624.89	624.45	11.0	Overburden	6.93	617.5	8.02	616.43
MW 100B	624.86	624.45	19.3	Bedrock	6.93	617.5	7.72	616.73
MW 101	624.83	624.27	20.0	Overburden	7.06	617.2	8.01	616.26
MW 101B	624.85	624.27	29.3	Bedrock	7.55	616.7	7.19	617.08
MWPS-1	623.98	623.98	11.5	Overburden	7.74	616.2	7.53	616.45
MWPS-2	624.41	624.22	10.5	Overburden	7.09	617.1	7.98	616.24
MWPS-3	624.25	624.06	10.5	Overburden	6.98	617.1	7.83	616.23

Notes:

Vertical Datum is NAVD88. Horizontal and Vertical control was established by NYSNET RTK.

Elevations in feet above mean sea level.

DTW = depth to water from top of riser; Well Depth from well logs, or measurements, in feet.

NA = not available

* = water over casing and water level not likely representative of groundwater elevation

- = not measured

Location			BR-01		BR-02		DP-07		DP-24		DP-25		MW-100		MW-100B		MW-100B	
Sample Date			12/12/2024		12/12/2024		12/12/2024		12/10/2024		12/10/2024		12/12/2024		12/10/2024		12/11/2024	
Field Sample ID			932128-BR-01-17.5		932128-BR02-017		932128-DP-07-010		932128-DP-24-016		932128-DP-25-010		932128-MW100-011		932128-MW-100B-017.5		932128-MW-100B-17.5 Dup	
Qc Code			FS		FS		FS		FS		FS		FS		FS		FD	
Parameter	GA	GV	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Volatile Organic Compounds (VOCs) (ug/L)																		
1,1-Dichloroethene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		2 U		1 U	
1,2,4-Trimethylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		270 J		130 J	
1,3,5-Trimethylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		30		23	
4-iso-Propyltoluene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		19		12	
Acetone	NS	50	50 U		50 U		50 U		50 U		50 U		50 U		7.4 J		6.5 J	
Benzene	1	NS	1 U		0.22 J		1 U		1 U		1 U		1 U		2 U		1 U	
Chlorobenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		2 U		1 U	
cis-1,2-Dichloroethene	5	NS	20		6.7		3.5		1 U		1.1		1.5		3.3		3	
Cyclohexane	NS	NS	5 U		5 U		5 U		5 U		5 U		5 U		11		8.3	
Ethylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		2 J		0.27 J	
Isopropylbenzene	5	NS	1 U		3.3		1 U		1 U		1 U		1 U		22		4.8	
Methyl cyclohexane	NS	NS	1 UJ		2.9 J		1 UJ		1 UJ		1 UJ		1 UJ		59 J		57 J	
n-Butylbenzene	5	NS	1 U		0.62 J		1 U		1 U		1 U		1 U		23 J		13 J	
Naphthalene	NS	10	2 U		2 U		2 U		2 U		2 U		2 U		1.9 J		1.2 J	
Propylbenzene	5	NS	1 U		1.7		1 U		1 U		1 U		1 U		28		6	
sec-Butylbenzene	5	NS	1 U		3.6		1 U		1 U		1 U		1 U		27 J		11 J	
tert-Butylbenzene	5	NS	1 U		4		1 U		1 U		1 U		1 U		8.3		6.6	
Tetrachloroethene	5	NS	28 J		1 UJ		9.6 J		1 UJ		1 UJ		1.2 J		2 UJ		1 UJ	
Toluene	5	NS	1 J		1 U		1 U		1 U		1 U		1 U		2 U		1 U	
trans-1,2-Dichloroethene	5	NS	0.47 J		1 U		1 U		1 U		1 U		1 U		2 U		0.22 J	
Trichloroethene	5	NS	5.7		1 U		1		1 U		1 U		0.49 J		2 U		1 U	
Vinyl chloride	2	NS	4.3		7.2		0.79 J		2 U		2 U		2 U		27		25	
Xylene, o	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		0.7 J		0.47 J	
Xylenes (m&p)	5	NS	2 U		2 U		2 U		2 U		2 U		2 U		9.6		4.5	
Xylenes, Total	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		9.6		4.5	

Notes:
Only detected compounds shown.
Detected results in **BOLD**.
Standards
GV = New York State Guidance Values
Gray highlight exceeds GA; Yellow exceeds GV
ug/L = micrograms per liter
QC Codes
FS = Field Sample
FD = Field Duplicate
Qual = qualifier
U = not detected; result is the detection limit
J = result is estimated

Location			MW-101		MW-101		MW-101B		MW-2		MW-2B		MW-5		MWPS-01		MWPS-02	
Sample Date			12/11/2024		12/11/2024		12/11/2024		12/11/2024		12/12/2024		12/11/2024		12/10/2024		12/10/2024	
Field Sample ID			932128-MW101-011		932128-MW101-011-Dup		932128-MW101B-017		932128-MW-2-010		932128-MW-2B-17.5		932128-MW05-009		932128-MWPS01-010		932128-MWPS02-009	
Qc Code			FS		FD		FS		FS		FS		FS		FS		FS	
Parameter	GA	GV	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Volatile Organic Compounds (VOCs) (ug/L)																		
1,1-Dichloroethene	5	NS	2.5 J		2.3 J		1 U		1 U		1 U		1 U		1 U		4 U	
1,2,4-Trimethylbenzene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
1,3,5-Trimethylbenzene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
4-iso-Propyltoluene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
Acetone	NS	50	500 U		500 U		50 U		50 U		50 U		50 U		2.7 J		24 J	
Benzene	1	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
Chlorobenzene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
cis-1,2-Dichloroethene	5	NS	1300		1300		1.1		21		19		15		29		4 U	
Cyclohexane	NS	NS	50 U		50 U		5 U		5 U		5 U		5 U		5 U		20 U	
Ethylbenzene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
Isopropylbenzene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
Methyl cyclohexane	NS	NS	10 UJ		10 UJ		1 UJ		1 UJ		1 UJ		1 UJ		1 UJ		4 UJ	
n-Butylbenzene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
Naphthalene	NS	10	20 U		20 U		2 U		2 U		2 U		2 U		2 U		8 U	
Propylbenzene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
sec-Butylbenzene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
tert-Butylbenzene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
Tetrachloroethene	5	NS	4.1 J		4 J		1 UJ		1 UJ		0.83 J		60 J		13 J		4 UJ	
Toluene	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	
trans-1,2-Dichloroethene	5	NS	23		22		1 U		0.56 J		0.54 J		1 U		0.27 J		4 U	
Trichloroethene	5	NS	2.5 J		3.4 J		1 U		1.4		2.7		7.9		4.8		4 U	
Vinyl chloride	2	NS	630		620		2 U		0.27 J		0.62 J		1.7 J		0.8 J		8 U	
Xylene, o	5	NS	2 J		2.3 J		1 U		1 U		1 U		1 U		1 U		4 U	
Xylenes (m&p)	5	NS	20 U		20 U		2 U		2 U		2 U		2 U		2 U		8 U	
Xylenes, Total	5	NS	10 U		10 U		1 U		1 U		1 U		1 U		1 U		4 U	

Notes:
Only detected compounds shown.
Detected results in **BOLD**.
Standards
GV = New York State Guidance Values
Gray highlight exceeds GA; Yellow exceeds GV
ug/L = micrograms per liter
QC Codes
FS = Field Sample
FD = Field Duplicate
Qual = qualifier
U = not detected; result is the detection limit
J = result is estimated

Location			MWPS-03		SP-01		SP-02		SP-03		SP-05		SP-06		SP-07		SP-08	
Sample Date			12/12/2024		12/10/2024		12/10/2024		12/12/2024		12/10/2024		12/11/2024		12/10/2024		12/10/2024	
Field Sample ID			932128-MWPS03-009		932128-SP01-007		932128-SP02-007		932128-SP-03-007		932128-SP05-011		932128-SP-06-007		932128-SP07-010		932128-SP08-010	
Qc Code			FS		FS		FS		FS		FS		FS		FS		FS	
Parameter	GA	GV	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Volatile Organic Compounds (VOCs) (ug/L)																		
1,1-Dichloroethene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
1,2,4-Trimethylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
1,3,5-Trimethylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
4-iso-Propyltoluene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		0.17 J	
Acetone	NS	50	50 U		50 U		5 J		50 U		50 U		50 U		50 U		6.5 J	
Benzene	1	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Chlorobenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		0.92 J	
cis-1,2-Dichloroethene	5	NS	1 U		1 U		1 U		1 U		99		3.4		29		1 U	
Cyclohexane	NS	NS	5 U		5 U		5 U		5 U		5 U		5 U		5 U		5 U	
Ethylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Isopropylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Methyl cyclohexane	NS	NS	1 UJ		1 UJ		1 UJ		1 UJ		1 UJ		1 UJ		1 UJ		1 UJ	
n-Butylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Naphthalene	NS	10	2 U		2 U		2 U		2 U		2 U		2 U		2 U		2 U	
Propylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
sec-Butylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
tert-Butylbenzene	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Tetrachloroethene	5	NS	1.1 J		1 UJ		1 UJ		2.6 J		190		13 J		14 J		1.5 J	
Toluene	5	NS	0.24 J		1 U		1 U		1 U		1 U		1 U		1 U		0.19 J	
trans-1,2-Dichloroethene	5	NS	1 U		1 U		1 U		1 U		2.6		1 U		0.26 J		1 U	
Trichloroethene	5	NS	1 U		1 U		1 U		1 U		49		1.5		5.2		1 U	
Vinyl chloride	2	NS	2 U		2 U		2 U		2 U		4		0.77 J		0.9 J		2 U	
Xylene, o	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Xylenes (m&p)	5	NS	2 U		2 U		2 U		2 U		2 U		2 U		2 U		2 U	
Xylenes, Total	5	NS	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	

Notes:
Only detected compounds shown.
Detected results in **BOLD**.
Standards
GV = New York State Guidance Values
Gray highlight exceeds GA; Yellow exceeds GV
ug/L = micrograms per liter
QC Codes
FS = Field Sample
FD = Field Duplicate
Qual = qualifier
U = not detected; result is the detection limit
J = result is estimated

Table 2.2: Remaining Groundwater Contamination

Location			SP-13		SP-17		SP-19		SP-22	
Sample Date			12/11/2024		12/12/2024		12/12/2024		12/10/2024	
Field Sample ID			932128-SP13-010		932128-SP017-010		932128-SP-19-010		932128-SP-22-010	
Qc Code			FS		FS		FS		FS	
Parameter	GA	GV	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Volatile Organic Compounds (VOCs) (ug/L)										
1,1-Dichloroethene	5	NS	1 U		1 U		1 U		1 U	
1,2,4-Trimethylbenzene	5	NS	1 U		1 U		1 U		1 U	
1,3,5-Trimethylbenzene	5	NS	1 U		1 U		1 U		1 U	
4-iso-Propyltoluene	5	NS	1 U		1 U		1 U		1 U	
Acetone	NS	50	50 U		2.2 J		50 U		50 U	
Benzene	1	NS	1 U		1 U		1 U		1 U	
Chlorobenzene	5	NS	1 U		1 U		1 U		1 U	
cis-1,2-Dichloroethene	5	NS	1 U		7.8		19		1 U	
Cyclohexane	NS	NS	5 U		5 U		5 U		5 U	
Ethylbenzene	5	NS	1 U		1 U		1 U		1 U	
Isopropylbenzene	5	NS	1 U		1 U		1 U		1 U	
Methyl cyclohexane	NS	NS	1 UJ		1 UJ		1 UJ		1 UJ	
n-Butylbenzene	5	NS	1 U		1 U		1 U		1 U	
Naphthalene	NS	10	2 U		2 U		2 U		2 U	
Propylbenzene	5	NS	1 U		1 U		1 U		1 U	
sec-Butylbenzene	5	NS	1 U		1 U		1 UJ		1 U	
tert-Butylbenzene	5	NS	1 U		1 U		1 U		1 U	
Tetrachloroethene	5	NS	1 UJ		26 J		4.2 J		3.2 J	
Toluene	5	NS	1 U		1 U		1 U		1 U	
trans-1,2-Dichloroethene	5	NS	1 U		0.39 J		1 U		1 U	
Trichloroethene	5	NS	1 U		4.2		3.6		1 U	
Vinyl chloride	2	NS	2 U		2 U		2 U		2 U	
Xylene, o	5	NS	1 U		1 U		1 U		1 U	
Xylenes (m&p)	5	NS	2 U		2 U		2 U		2 U	
Xylenes, Total	5	NS	1 U		1 U		1 U		1 U	

Notes:
Only detected compounds shown.
Detected results in **BOLD**.
Standards
GV = New York State Guidance Values
Gray highlight exceeds GA; Yellow exceeds GV
ug/L = micrograms per liter
QC Codes
FS = Field Sample
FD = Field Duplicate
Qual = qualifier
U = not detected; result is the detection limit
J = result is estimated

Table 2.3: 2014 Post IRM Soil VOC Results

Location				ESB-01		ESB-02		ESB-03		ESB-04	
Date				04/18/14		04/23/14		04/24/14		05/07/14	
Sample ID				932128ESB0111		932128ESB0211		932128ESB0312		932128ESB0410	
Sample Depth (ft bgs)				11		11		12		10	
QC Code				FS		FS		FS		FS	
Parameter	Soil Cleanup Objectives			Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
	Unrestricted	Protection	Residential								
Volatile Organics (mg/Kg)	Use	Of GW	Use								
1,1-Dichloroethene	0.33	0.33	100	0.004	U	0.0049	U	0.00068	J	0.0038	U
1,2,4-Trimethylbenzene	3.6	3.6	47	0.066		2.3		0.87		3.8	
1,3,5-Trimethylbenzene	8.4	8.4	47	0.023		0.084		0.028		0.1	
2-Hexanone	NA	NA	NA	0.02	U	0.025	U	0.02	U	0.019	U
4-iso-Propyltoluene	NA	NA	NA	0.0057		0.033		0.01		0.02	
Acetone	0.05	0.05	100	0.02	U	0.025	U	0.02	U	0.0052	J
Benzene	0.06	0.06	2.9	0.004	U	0.0049	U	0.0039	U	0.0038	U
Cis-1,2-Dichloroethene	0.25	0.25	59	0.0071		0.045		1.3		0.12	J
Cyclohexane	NA	NA	NA	0.0034	J	0.0049	U	0.0035	J	0.0048	
Ethyl benzene	1	1	30	0.0016	J	0.0045	J	0.0048		0.0058	
Isopropylbenzene	NA	NA	NA	0.0033	J	0.019		0.0097		0.014	
Methyl cyclohexane	NA	NA	NA	0.0082		0.048		0.013		0.011	
Methylene chloride	0.05	0.05	51	0.004	U	0.0049	U	0.0039	U	0.0038	U
Naphthalene	12	12	100	0.0017	J	0.011		0.015		0.022	
n-Butylbenzene	12	12	100	0.0031	J	0.033		0.012		0.013	
Propylbenzene	3.9	3.9	100	0.0068		0.043		0.02		0.025	
sec-Butylbenzene	11	11	100	0.004	U	0.0049	U	0.011		0.012	
tert-Butylbenzene	5.9	5.9	100	0.004	U	0.0038	J	0.0015	J	0.0018	J
Tetrachloroethene	1.3	1.3	5.5	0.004	U	15		0.019		0.00052	J
Toluene	0.7	0.7	100	0.004	U	0.0049	U	0.0039	U	0.0038	U
trans-1,2-Dichloroethene	0.19	0.19	100	0.004	U	0.00053	J	0.0099		0.0025	J
Trichloroethene	0.47	0.47	10	0.004	U	0.53		0.012		0.0038	U
Trichlorofluoromethane	NA	NA	NA	0.004	U	0.0049	U	0.0039	U	0.0038	U
Vinyl chloride	0.02	0.02	0.21	0.004	U	0.0049	U	0.14		0.0014	J
Xylene, o	0.26	1.6	100	0.0032	J	0.003	J	0.0055		0.0038	U
Xylenes (m&p)	0.26	1.6	100	0.013		0.019		0.016		0.11	
Xylenes, Total	0.26	1.6	100	0.016		0.022		0.022		0.11	

Notes:
Volatile Organic Compounds analysis by USEPA Method 8260C;
Results in milligrams per kilogram (mg/Kg)(only detected compounds shown)
(detections in bold)
ft bgs = feet below ground surface
Qualifier:
J = estimated value
U = compound not detected at concentration above reporting limit.
Soil Cleanup Objectives = 6 NYCRR Part 375
(Shaded cells > lowest standards)
NA = criteria not available
QC Code: FS=field sample; FD = field duplicate
ND = not detected

Table 2.3: 2014 Post IRM Soil VOC Results

Location Date Sample ID Sample Depth (ft bgs) QC Code				ESW-01 04/18/14 932128ESW0110 10 FS		ESW-02 04/21/14 932128ESW0210 10 FS		ESW-03 04/21/14 932128ESW0310 10 FS		ESW-04 04/24/14 932128ESW0412 12 FS	
Parameter	Soil Cleanup Objectives			Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
	Unrestricted Use	Protection Of GW	Residential Use								
Volatile Organics (mg/Kg)											
1,1-Dichloroethene	0.33	0.33	100	0.0047	U	0.0043	U	0.036	U	0.0039	U
1,2,4-Trimethylbenzene	3.6	3.6	47	0.0047	U	0.018		20		0.061	
1,3,5-Trimethylbenzene	8.4	8.4	47	0.0047	U	0.0066		5.4		0.001	J
2-Hexanone	NA	NA	NA	0.023	U	0.021	U	0.81		0.02	U
4-iso-Propyltoluene	NA	NA	NA	0.0047	U	0.0026	J	2.6		0.00061	J
Acetone	0.05	0.05	100	0.023	U	0.021	U	0.18	U	0.02	U
Benzene	0.06	0.06	2.9	0.0047	U	0.0043	U	0.036	U	0.0039	U
Cis-1,2-Dichloroethene	0.25	0.25	59	0.0047	U	0.0043	U	0.036	U	1.1	
Cyclohexane	NA	NA	NA	0.0047	U	0.0043	U	0.098		0.0039	U
Ethyl benzene	1	1	30	0.0047	U	0.00038	J	0.036	U	0.0023	J
Isopropylbenzene	NA	NA	NA	0.0047	U	0.00093	J	1		0.004	
Methyl cyclohexane	NA	NA	NA	0.0047	U	0.0096		0.94		0.0059	
Methylene chloride	0.05	0.05	51	0.0047	U	0.0043	U	0.036	U	0.0039	U
Naphthalene	12	12	100	0.0047	U	0.0043	U	0.15		0.013	
n-Butylbenzene	12	12	100	0.0047	U	0.0023	J	1.8		0.0051	
Propylbenzene	3.9	3.9	100	0.0047	U	0.0022	J	2.5		0.008	
sec-Butylbenzene	11	11	100	0.0047	U	0.0043	U	1.9		0.0054	
tert-Butylbenzene	5.9	5.9	100	0.0047	U	0.0043	U	0.2		0.00066	J
Tetrachloroethene	1.3	1.3	5.5	0.0047	U	0.0043	U	0.036	U	0.01	
Toluene	0.7	0.7	100	0.0047	U	0.0043	U	0.036	U	0.0039	U
trans-1,2-Dichloroethene	0.19	0.19	100	0.0047	U	0.0043	U	0.036	U	0.0056	
Trichloroethene	0.47	0.47	10	0.0047	U	0.0043	U	0.036	U	0.0039	U
Trichlorofluoromethane	NA	NA	NA	0.0047	U	0.0043	U	0.036	U	0.0039	U
Vinyl chloride	0.02	0.02	0.21	0.0047	U	0.0043	U	0.036	U	0.0081	J
Xylene, o	0.26	1.6	100	0.0047	U	0.0043	U	0.036	U	0.0025	J
Xylenes (m&p)	0.26	1.6	100	0.0093	U	0.0023	J	0.78		0.004	J
Xylenes, Total	0.26	1.6	100	0.0093	U	0.0023	J	0.78		0.0065	J

Notes:
Volatile Organic Compounds analysis by USEPA Method 8260C;
Results in milligrams per kilogram (mg/Kg)(only detected compounds shown)
(detections in bold)
ft bgs = feet below ground surface
Qualifier:
J = estimated value
U = compound not detected at concentration above reporting limit.
Soil Cleanup Objectives = 6 NYCRR Part 375
(Shaded cells > lowest standards)
NA = criteria not available
QC Code: FS=field sample; FD = field duplicate
ND = not detected

Table 2.3: 2014 Post IRM Soil VOC Results

Location				ESW-04		ESW-06		ESW-07		ESW-08	
Date				04/24/14		05/06/14		05/07/14		05/09/14	
Sample ID				932128ESW0412D		932128ESW0610		932128ESW0710		932128ESW0810	
Sample Depth (ft bgs)				12		10		10		10	
QC Code				FD		FS		FS		FS	
Parameter	Soil Cleanup Objectives			Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
	Unrestricted	Protection	Residential								
Volatile Organics (mg/Kg)	Use	Of GW	Use								
1,1-Dichloroethene	0.33	0.33	100	0.0034	U	0.004	U	0.0041	U	0.0043	U
1,2,4-Trimethylbenzene	3.6	3.6	47	0.033		0.57		0.0041	U	0.0043	U
1,3,5-Trimethylbenzene	8.4	8.4	47	0.0011	J	0.052		0.0041	U	0.0043	U
2-Hexanone	NA	NA	NA	0.017	U	0.02	U	0.02	U	0.022	U
4-iso-Propyltoluene	NA	NA	NA	0.0034	U	0.012		0.0041	U	0.0043	U
Acetone	0.05	0.05	100	0.017	U	0.0045	J	0.0048	J	0.0062	J
Benzene	0.06	0.06	2.9	0.0034	U	0.004	U	0.0041	U	0.0043	U
Cis-1,2-Dichloroethene	0.25	0.25	59	0.91		0.037		0.15	J	0.059	
Cyclohexane	NA	NA	NA	0.0034	U	0.0045		0.0041	U	0.0043	U
Ethyl benzene	1	1	30	0.0012	J	0.0079		0.0041	U	0.0043	U
Isopropylbenzene	NA	NA	NA	0.0019	J	0.011		0.0041	U	0.0043	U
Methyl cyclohexane	NA	NA	NA	0.0023	J	0.008		0.00075	J	0.0043	U
Methylene chloride	0.05	0.05	51	0.0034	U	0.004	U	0.0041	U	0.0043	U
Naphthalene	12	12	100	0.0066		0.0047		0.0041	U	0.0043	U
n-Butylbenzene	12	12	100	0.0034	U	0.004	U	0.0041	U	0.0043	U
Propylbenzene	3.9	3.9	100	0.0038		0.021		0.0041	U	0.0043	U
sec-Butylbenzene	11	11	100	0.0034	U	0.004	U	0.0041	U	0.002	J
tert-Butylbenzene	5.9	5.9	100	0.0034	U	0.0015	J	0.0041	U	0.0043	U
Tetrachloroethene	1.3	1.3	5.5	0.0067		0.004	U	0.71		0.035	
Toluene	0.7	0.7	100	0.0034	U	0.00041	J	0.0041	U	0.0043	U
trans-1,2-Dichloroethene	0.19	0.19	100	0.004		0.00063	J	0.0024	J	0.0015	J
Trichloroethene	0.47	0.47	10	0.00086	J	0.00094	J	0.063	J	0.0055	
Trichlorofluoromethane	NA	NA	NA	0.0034	U	0.004	U	0.0041	U	0.0043	U
Vinyl chloride	0.02	0.02	0.21	0.0026	J	0.004	U	0.0012	J	0.001	J
Xylene, o	0.26	1.6	100	0.0014	J	0.0082		0.0041	U	0.0043	U
Xylenes (m&p)	0.26	1.6	100	0.0026	J	0.025		0.0081	U	0.0086	U
Xylenes, Total	0.26	1.6	100	0.004	J	0.033		0.0081	U	0.0086	U

Notes:
Volatile Organic Compounds analysis by USEPA Method 8260C;
Results in milligrams per kilogram (mg/Kg)(only detected compounds shown)
(detections in bold)
ft bgs = feet below ground surface
Qualifier:
J = estimated value
U = compound not detected at concentration above reporting limit.
Soil Cleanup Objectives = 6 NYCRR Part 375
(Shaded cells > lowest standards)
NA = criteria not available
QC Code: FS=field sample; FD = field duplicate
ND = not detected

Table 2.3: 2014 Post IRM Soil VOC Results

Location Date Sample ID Sample Depth (ft bgs) QC Code				ESW-09 05/13/14 932128ESW0911 11 FS		ESW-10 05/13/14 932128ESW1011 11 FS		ESW-11 05/15/14 932128ESW1111 11 FS		ESW-12 05/19/14 932128ESW1211 11 FS	
Parameter	Soil Cleanup Objectives			Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
	Unrestricted Use	Protection Of GW	Residential Use								
Volatile Organics (mg/Kg)											
1,1-Dichloroethene	0.33	0.33	100	0.0044	U	0.00089	J	0.0045	U	0.0042	U
1,2,4-Trimethylbenzene	3.6	3.6	47	0.0044	U	0.0044	U	0.0045	U	2.6	
1,3,5-Trimethylbenzene	8.4	8.4	47	0.0044	U	0.0044	U	0.0045	U	0.68	
2-Hexanone	NA	NA	NA	0.022	U	0.022	U	0.022	U	0.021	U
4-iso-Propyltoluene	NA	NA	NA	0.0044	U	0.0044	U	0.0045	U	0.016	
Acetone	0.05	0.05	100	0.022	U	0.017	J	0.022	U	0.0055	J
Benzene	0.06	0.06	2.9	0.0044	U	0.0044	U	0.0045	U	0.0042	U
Cis-1,2-Dichloroethene	0.25	0.25	59	0.0044	U	0.0044	U	0.0045	U	0.0042	U
Cyclohexane	NA	NA	NA	0.0044	U	0.0044	U	0.0045	U	0.0042	U
Ethyl benzene	1	1	30	0.0044	U	0.0044	U	0.0045	U	0.029	
Isopropylbenzene	NA	NA	NA	0.0044	U	0.0044	U	0.0045	U	0.02	
Methyl cyclohexane	NA	NA	NA	0.0044	U	0.0044	U	0.0045	U	0.088	
Methylene chloride	0.05	0.05	51	0.0044	U	0.0044	U	0.0045	U	0.0042	U
Naphthalene	12	12	100	0.0044	U	0.0044	U	0.0045	U	0.12	
n-Butylbenzene	12	12	100	0.0044	U	0.0044	U	0.0045	U	0.12	
Propylbenzene	3.9	3.9	100	0.0044	U	0.0044	U	0.0045	U	0.13	
sec-Butylbenzene	11	11	100	0.0044	U	0.0044	U	0.0045	U	0.0042	U
tert-Butylbenzene	5.9	5.9	100	0.0044	U	0.0044	U	0.0045	U	0.0042	U
Tetrachloroethene	1.3	1.3	5.5	0.0044	U	0.0044	U	0.0045	U	0.0042	U
Toluene	0.7	0.7	100	0.0044	U	0.0044	U	0.0045	U	0.0042	U
trans-1,2-Dichloroethene	0.19	0.19	100	0.0044	U	0.0044	U	0.0045	U	0.0042	U
Trichloroethene	0.47	0.47	10	0.0044	U	0.0044	U	0.0045	U	0.0042	U
Trichlorofluoromethane	NA	NA	NA	0.0044	U	0.0044	U	0.0045	U	0.0042	UJ
Vinyl chloride	0.02	0.02	0.21	0.0044	U	0.0044	U	0.0045	U	0.0042	U
Xylene, o	0.26	1.6	100	0.0044	U	0.0044	U	0.0045	U	0.0059	
Xylenes (m&p)	0.26	1.6	100	0.0089	U	0.0088	U	0.009	U	0.068	
Xylenes, Total	0.26	1.6	100	0.0089	U	0.0088	U	0.009	U	0.074	

Notes:
Volatile Organic Compounds analysis by USEPA Method 8260C;
Results in milligrams per kilogram (mg/Kg)(only detected compounds shown)
(detections in bold)
ft bgs = feet below ground surface
Qualifier:
J = estimated value
U = compound not detected at concentration above reporting limit.
Soil Cleanup Objectives = 6 NYCRR Part 375
(Shaded cells > lowest standards)
NA = criteria not available
QC Code: FS=field sample; FD = field duplicate
ND = not detected

Table 2.3: 2014 Post IRM Soil VOC Results

				Location		ESW-13		ESW-14		ESW-15	
				Date		05/20/14		05/20/14		05/20/14	
				Sample ID		932128ESW1311		932128ESW1411		932128ESW1511	
				Sample Depth (ft bgs)		11		11		11	
				QC Code		FS		FS		FS	
Parameter	Soil Cleanup Objectives			Result		Qualifier		Result		Qualifier	
	Unrestricted	Protection	Residential								
Volatile Organics (mg/Kg)	Use	Of GW	Use								
1,1-Dichloroethene	0.33	0.33	100	0.0046	U			0.005	U	0.0061	U
1,2,4-Trimethylbenzene	3.6	3.6	47	0.011				0.005	U	0.0025	J
1,3,5-Trimethylbenzene	8.4	8.4	47	0.0014	J			0.005	U	0.0061	U
2-Hexanone	NA	NA	NA	0.023	U			0.025	U	0.031	U
4-iso-Propyltoluene	NA	NA	NA	0.0046	U			0.005	U	0.0061	U
Acetone	0.05	0.05	100	0.023	U			0.025	U	0.031	U
Benzene	0.06	0.06	2.9	0.0016	J			0.005	U	0.0061	U
Cis-1,2-Dichloroethene	0.25	0.25	59	0.0016	J			0.005	U	0.0061	U
Cyclohexane	NA	NA	NA	0.0046	U			0.005	U	0.0061	U
Ethyl benzene	1	1	30	0.003	J			0.005	U	0.0061	U
Isopropylbenzene	NA	NA	NA	0.0046	U			0.005	U	0.0061	U
Methyl cyclohexane	NA	NA	NA	0.0046	U			0.005	U	0.0014	J
Methylene chloride	0.05	0.05	51	0.0046	U			0.005	U	0.0038	J
Naphthalene	12	12	100	0.0015	J			0.005	U	0.0022	J
n-Butylbenzene	12	12	100	0.0046	U			0.005	U	0.0061	U
Propylbenzene	3.9	3.9	100	0.0011	J			0.005	U	0.0016	J
sec-Butylbenzene	11	11	100	0.0046	U			0.005	U	0.0061	U
tert-Butylbenzene	5.9	5.9	100	0.0046	U			0.005	U	0.0061	U
Tetrachloroethene	1.3	1.3	5.5	0.001	J			0.001	J	0.0061	U
Toluene	0.7	0.7	100	0.0018	J			0.005	U	0.0061	U
trans-1,2-Dichloroethene	0.19	0.19	100	0.0046	U			0.005	U	0.0061	U
Trichloroethene	0.47	0.47	10	0.0016	J			0.005	U	0.0061	U
Trichlorofluoromethane	NA	NA	NA	0.0046	UJ			0.005	UJ	0.0022	J
Vinyl chloride	0.02	0.02	0.21	0.0046	U			0.005	U	0.0061	U
Xylene, o	0.26	1.6	100	0.0013	J			0.005	U	0.0061	U
Xylenes (m&p)	0.26	1.6	100	0.01				0.01	U	0.012	U
Xylenes, Total	0.26	1.6	100	0.011				0.01	U	0.012	U

Notes:
Volatile Organic Compounds analysis by USEPA Method 8260C;
Results in milligrams per kilogram (mg/Kg)(only detected compounds shown)
(detections in bold)
ft bgs = feet below ground surface
Qualifier:
J = estimated value
U = compound not detected at concentration above reporting limit.
Soil Cleanup Objectives = 6 NYCRR Part 375
(Shaded cells > lowest standards)
NA = criteria not available
QC Code: FS=field sample; FD = field duplicate
ND = not detected

Table 4.1 - Post Remediation Sampling Requirements and Schedule

		Schedule = Annual			
Location ID	Sample ID	VOCs 8260B	MNA	DUP (VOCs)	MS/MSD (VOCs)
Monitoring Well / Microwell Sampling					
MW-1	932128-MW001010	1			
MW-2	932128-MW002010	1	1		
MW-2B	932128-MW02B016	1			
MW-5	932128-MW005010	1	1		
BR-01	932128-BR001015	1	1		
BR-02	932128-BR002015	1			
SP-01	932128-SP001010	1			
SP-02	932128-SP002010	1			
SP-03	932128-SP003010	1			
SP-05	932128-SP005010	1	1		
SP-06	932128-SP006010	1			
SP-07	932128-SP007010	1	1		
SP-08	932128-SP008010	1			
SP-13	932128-SP013010	1			
SP-17	932128-SP017010	1			1
SP-19	932128-SP019010	1			
SP-22	932128-SP022010	1			
DP-07	932128-DP007010	1			
DP-24	932128-DP024010	1			
DP-25	932128-DP025010	1			
MW-100	932128-MW100010	1			
MW-100B	932128-MW100B016	1		1	1
MW-101	932128-MW101010	1	1	1	
MW-101B	932128-MW101B016	1			
MWPS-1	932128-MWPS-1010	1	1		
MWPS-2	932128-MWPS-2010	1	1		
MWPS-3	932128-MWPS-3010	1	1		
TOTAL SAMPLES		27	9	2	2

NOTES:

bgs = below ground surface

Sample ID: 932128 = NYSDEC Site No.; Followed by well ID and last three digits represent depth in feet bgs.

8260B VOCs = Target Compound List Volatile Organic Compounds

Monitoring Natural Attenuation Parameters = TOC by Method 415.1, Nitrate and Sulfate by Standard Method 3001, Methane/Ethane/Ethene by USEPA Method RSK-175, Alkalinity by Standard Method 2320B, Chloride and Sulfide by Standard Method 4500S2 F, and iron and manganese by USEPA Method 6010C. pH, dissolved oxygen, specific conductance and reduction/oxidation potential will be measured during well stabilization.

Table 4.2 - Monitoring Well Construction Details

Location	Northing	Easting	Accuracy	Ground Elevation	Riser Elevation	Riser Diameter (in.)	Well Depth	Location/Use
Overburden Wells								
BR-01	1151511.4	1119081.8	Survey	623.91	623.25	2	20.0	Site Well
DP-07	1151470.1	1119080.5	Survey	624.03	623.46	1	11.9	Site Well
DP-24	1151472.1	1118897.1	Survey	621.23	620.89	1	18.0	Downgradient/Sentinel
DP-25	1151531.6	1118910.2	Survey	621.32	621.17	1	16.0	Downgradient/Sentinel
MW-1*	1151449.4	1119078.7	Survey	624.41	NA	4	9.0	Site Well
MW-2	1151418.2	1119082.0	Survey	624.32	624.00	4	14.0	Site Well
MW-5	1151396.9	1119096.2	Survey	624.43	624.16	4	10.0	Downgradient
SP-01	1151574.86	1119091.65	Survey	625.28	625.23	1	12.0	Downgradient/Sentinel
SP-02	1151575.25	1119019.6	Survey	623.60	623.58	1	12.0	Downgradient/Sentinel
SP-03	1151533.5	1119038.7	Survey	623.31	623.25	1	12.0	Downgradient
SP-05	1151406.2	1119055.4	Survey	624.13	623.98	1	12.0	Downgradient
SP-06	1151526.0	1119074.0	Survey	623.55	623.43	1	12.0	Downgradient
SP-07	1151326.8	1119098.8	Survey	625.47	625.30	1	11.0	Site Well - Upgradient
SP-08	1151532.0	1119129.9	Survey	625.03	624.94	1	15.0	Downgradient
SP-13	1151571.2	1119160.7	Survey	626.57	626.42	1	15.0	Downgradient/Sentinel
SP-17	1151533.1	1118988.6	Survey	622.35	621.96	1	15.0	Downgradient
SP-19	1151421.8	1118977.1	Survey	622.88	622.76	1	15.0	Downgradient
SP-22	1151440.1	1119199.6	GIS	628.00	NA	1	11.0	Upgradient
MW-100	1151428.5	1119139.87	Survey	624.89	624.45	2	11.0	Former Source
MW 101	1151474.0	1119118.0	Survey	624.83	624.27	2	20.0	Site Well
MWPS-1	1151394.1	1119075.0	Survey-2024	623.98	623.98	1	11.5	Site Well
MWPS-2	1151480.9	1119112.0	Survey-2024	624.41	624.22	1	10.5	Site Well
MWPS-3	1151492.2	1119105.0	Survey-2024	624.25	624.06	1	10.5	Site Well
Bedrock Wells								
BR-02	1151358.7	1119095.1	Survey	624.89	624.58	2	17.5	Site Well
MW 2B	1151418.0	1119086.6	Survey	623.95	623.41	2	23.0	Site Well
MW 100B	1151424.1	1119142.7	Survey	624.86	624.45	2	19.3	Below Former Source
MW 101B	1151471.4	1119121.1	Survey	624.85	624.27	2	29.3	Site Well

Notes:

Horizontal Coordinates reference to the New York State Plane Coordinate System, West Zone (3103) based on NAD 83 (2011). Vertical Datum is NAVD88. Horizontal and Vertical control was established by NYSNET RTK. Elevations in feet above mean sea level.

Accuracy = "Survey" completed by Prudent Engineering on 10/24/14. "GIS" located with GIS aerial photographs

"Survey-2024" completed by Patriot Design and Consulting on 3/8/2024

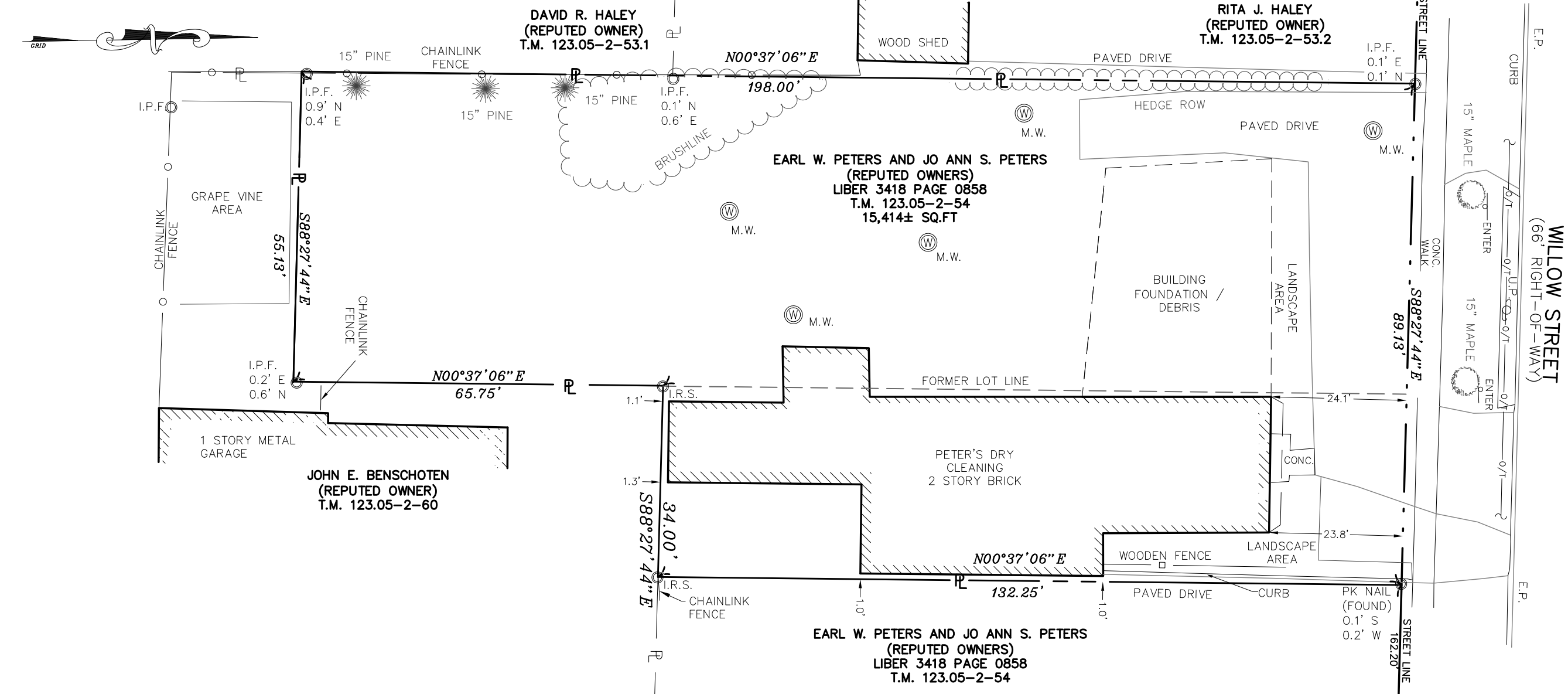
* - MW-1 may not be well connected with aquifer

APPENDICES

APPENDIX A

Site Survey and Environmental Easement

IN CHARGE OF M.A.V. DESIGNED BY M.A.V. CHECKED BY T.L.M. DRAFTED BY T.L.M. CHECKED BY M.A.V.

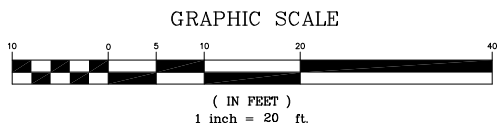


LEGEND

- BM BENCHMARK
- MANHOLE (UNKNOWN)
- VALVE (UNKNOWN)
- COMMUNICATIONS MANHOLE
- CONTROL POINT
- ELECTRIC MANHOLE
- GAS VALVE
- GAS LINE
- CATCH BASIN
- UTILITY POLE
- SANITARY MANHOLE
- WATER VALVE
- UNDERGROUND CABLE
- SANITARY SEWER
- WATER LINE
- MONITORING WELL
- STREET RIGHT-OF-WAY
- STREET RIGHT-OF-WAY
- ELECTRIC LINE
- CHAINLINK FENCE
- FIRE HYDRANT
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- TEST HOLE
- IPF/IRF IRON PIPE/ROD (FOUND)
- IRS IRON ROD (SET)

NOTES:

- HORIZONTAL COORDINATES REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM (NYSNET), WEST ZONE (3103) BASED ON NAD 83 (2011).
- VERTICAL DATUM BASED ON NAVD 88 (NYSNET).
- UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM A COMBINATION OF FIELD OBSERVATIONS, AVAILABLE MAPS, RECORDS AND INFORMATION PROVIDED BY THEIR OWNERS, THE LOCATION AND DESCRIPTION SHOULD BE CONSIDERED APPROXIMATE, THERE ALSO MAY BE OTHER FACILITIES, STRUCTURES OR UTILITIES IN THE AREA, THE EXISTENCE OF WHICH IS PRESENTLY UNKNOWN.



THE UNDERSIGNED SURVEYOR HEREBY CERTIFIES TO THE PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH THE COMMISSIONER OF THE DEPARTMENT OF ENVIROMENTAL CONSERVATION THAT THIS IS AN ACCURATE MAP OF AN ACTUAL SURVEY COMPLETED 7/23/2013. SUBJECT TO ANY STATE OF FACTS AN ACCURATE ABSTRACT MAY REVEAL.



REFERENCES:

- MAP ENTITLED "MAP SHOWING SURVEY OF PROPERTY OWNED BY ROLLIN T. & MILDRED V. GRANT", DATED APRIL 22, 1947 AND REVISED FEB. 8, 1958.
- DEED REFERENCES:
 - LIBER 1575 PAGE 778
 - LIBER 1631 PAGE 171
 - LIBER 3418 PAGE 0857
 - LIBER 3063 PAGE 142
 - LIBER 2559 PAGE 323
 - LIBER 3423 PAGE 0594
 - LIBER 2151 PAGE 315

Boundary Survey Map	Part of -----	TOWN Lockport
Peter's Dry Cleaners	County of NIAGARA	State of New York
Lockport NY	Scale of 1 inch = 20'	Date 8/2/13
"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 FAX: (315) 432-9826 6390 FLY ROAD EAST SYRACUSE, N.Y. 13057 www.PrudentEng.com	Project No. 109.005-5 PRUDENT ENGINEERING

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Office of the General Counsel

625 Broadway, 14th Floor, Albany, New York 12233-1500

P: (518) 402-9185 | F: (518) 402-9018

www.dec.ny.gov

VIA FEDERAL EXPRESS

December 5, 2024

City of Lockport
One Lock's Plaza
Lockport, NY 14094
Attn: David Blackley, Corporate Counsel

RE: Environmental Easement Package
Site Name: Peter's Dry Cleaning
Site No.: 932128

Dear Mr. Blackley,

Enclosed please find a fully executed Environmental Easement, TP-584 and Agreement between the New York State Department of Environmental Conservation and the City of Lockport.

Once the Environmental Easement is recorded, the local municipality will need to be notified via Certified Mail, Return Receipt Requested.

Please return to my attention, copies of the recorded easement marked by the County Clerk's Office with the date and location of recording, and a certified copy of the municipal notices. The information from the recorded easement and notices are necessary to process the Certificate of Completion (COC).

A COC will not be issued until copies of the municipal notices are returned to the Office of General Counsel.

If you have any further questions or concerns relating to this matter, please contact our office at (518) 402-8393.

Sincerely,



Cheryl A. Salem
Legal Assistant II
Remediation Bureau
Cheryl.salem@dec.ny.gov

ec: B. Rashkow, NYSDEC



Department of
Environmental
Conservation

ORIGIN ID:ALBA (518) 402-8599

CHERYL SALEM
NYSDCC CO
625 BROADWAY
14TH FLOOR - OGC
ALBANY, NY 12233

SHIP DATE: 05DEC24
ACTWGT: 1.00 LB
CAD: 25595370/INET/4535

BILL SENDER

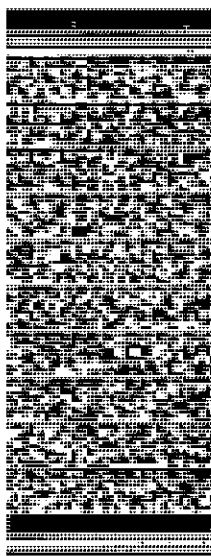
UNITED STATES US

TO DAVID BLACKLEY, CORP COUNSEL

CITY OF LOCKPORT
CITY OF LOCKPORT
CORPORATE COUNSEL
ONE LOCK'S PLAZA
LOCKPORT NY 14094

(716) 523-0617 REF: PETERS DRY CLEANER
INV: DEPT: 1500

58CJ4/EB78/C6C4



TRK# 7705 1521 8385
0201

FRI - 06 DEC 5:00P
STANDARD OVERNIGHT

XP DDKA

14094
NY-US BUF



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ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36
OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 2nd day of December, 2014, between City of Lockport, having an office at One Lock's Plaza, Lockport, County of Niagara, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee"), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the temporary owner of real property located at the address of 316 Willow Street in the City of Lockport, County of Niagara and State of New York, known and designated on the tax map of the County Clerk of Niagara as tax map parcel numbers: Section 123.05 Block 2 Lot 54, being the same as that property conveyed to Grantor by Order of Justice Richard Kloch under Index No. 150116 dated June 27, 2013. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.41 +/- acres, and is hereinafter more fully described in the Land Title Survey dated November 26, 2014 prepared by John E. McIntosh III, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Residential as described in 6 NYCRR Part 375-1.8(g)(2)(i), Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Niagara County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for farming raising livestock or producing animal products for human consumption, and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an

interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to: Site Number: 932128
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to: Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

11. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

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THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting by and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: Andrew O. Guglielmi
Andrew O. Guglielmi, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 2nd day of December in the year 2024 before me, the undersigned, personally appeared Andrew O. Guglielmi, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Doreen A. Salem
Notary Public - State of New York
Notary Public State of New York
Registration No. 01SA0002177
Qualified in Albany County
My Commission Expires March 3, 2027

SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Lockport, County of Niagara and State of New York, known and distinguished as being part of Lot Number 11, Section 14, Township 14, and Range 6 of the Holland Land Company's Land, which is bounded and described as follows:

BEGINNING at a point on the south line of Willow Street, said point being 162' west of the west line of Pine Street;

THENCE westerly along the south line of Willow Street 89' to a point;

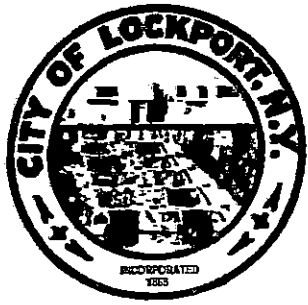
THENCE southerly on a line parallel to Pine Street, 198' to a point;

THENCE easterly on a line parallel to Willow Street 55' to a point;

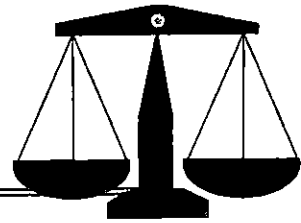
THENCE northerly on a line parallel to Pine Street, 66' to a point;

THENCE easterly on a line parallel to Willow Street, 34' to a point;

THENCE northerly 132' to the point of beginning.



Department of Law



David Blackley, Corporation Counsel

Anthony Serianni, First Deputy Counsel
Kathleen Kugler, Second Deputy Counsel

Lockport Municipal Building
One Locks Plaza
Lockport, New York 14094
Phone (716) 439-6670

Brian Rashkow
Assistant Counsel
Office of General Counsel
New York State Department of Environmental Conservation
625 Broadway, 14th Floor
Albany, New York 12233-1500

RE: 319 Willow Street
Lockport, New York

Dear Brian,

Enclosed please find the Executed Agreement between the New York State Department of Environmental Conservation and the City of Lockport pertaining to the above property.

Should you have any further concerns, please do not hesitate to contact me.

Sincerely,

David E. Blackley
Corporation Counsel

**Agreement Among
The New York State Department of Environmental Conservation,
and the City of Lockport**

This Agreement is entered on this 2nd day of December, 2024, by and among the City of Lockport (or “City”) with an office at One Lock’s Plaza, Lockport, New York, and the New York State Department of Environmental Conservation (“NYSDEC”), with an office at 625 Broadway, Albany, New York 12233 (collectively, “Parties”).

WHEREAS, NYSDEC is the Executive Agency of the State of New York responsible for enforcement of the Environmental Conservation Law of the State of New York (“ECL”) and the New York State Finance Law (“SFL”) and cleanup of contaminated properties pursuant to the ECL Article 27 and Article 12 of the Navigation Law (“NL”); and

WHEREAS, NYSDEC is responsible for carrying out the policy of the State of New York to conserve, improve and protect its natural resources and environment and control water, land, and air pollution consistent with the authority granted to the NYSDEC and its Commissioner by Article 1, Title 3 of the ECL; and

WHEREAS, NYSDEC also has the authority, *inter alia*, to provide for the prevention and abatement of all water, land, and air pollution (see, e.g., ECL 3-0301.1.1); and

WHEREAS, Chapter 847 of the Laws of 1982 created the Hazardous Waste Remedial Fund and assigned custody to the Office of the State Comptroller who is to make funds available to NYSDEC for the investigation and remediation of hazardous waste Sites; and such funds have been made available to the NYSDEC which has already utilized such funds to perform sampling, assessment, and focused remedial actions at the former Peter’s Dry-Cleaning Site, Site # 932128 (“Peter’s Dry-Cleaning Site” or “Site”); and

WHEREAS, State Superfund remedial work was implemented by the NYSDEC at the Peter’s Dry-Cleaning Site. The NYSDEC has made and exhausted all reasonable efforts to secure a voluntary agreement for payment of costs of, or implementation of, necessary remedial action from owners, operators, or other liable persons for past releases of contamination at this inactive hazardous waste site, but the NYSDEC has not identified any responsible party for that property having the ability to pay for the investigation or cleanup of the Peter’s Dry-Cleaning Site; and

WHEREAS, the Site requires an Environmental Easement as an Institutional Control in order to be reclassified as a Class 4 – Properly Closed Site. This reclassification allows for a third party to purchase and redevelop the Site with the NYSDEC’s consent, but without the need for further remedial action.

WHEREAS, the City of Lockport was granted Temporary Incidents of Ownership by Court Order of Justice Richard Kloch under Index No. 150116. The City has therefore agreed to grant said Environmental Easement over the property more fully described in the attached

Schedule “A,” with the goal of conveying the abandoned property for redevelopment; and

WHEREAS, the City is prepared to convey title to an interested redeveloper and have the parcel returned to the tax rolls and put back into productive commercial/industrial use; and

WHEREAS, the City of Lockport is a not-for-profit of the State of New York. The City seeks to vigorously advance the prosperity, growth and economic development of the residents and businesses of the City; and

WHEREAS, the Parties have a shared interest in ensuring that any environmental issues associated with the Site do not interfere with the return of such properties to the tax rolls and to productive use; and that such redevelopment is timely and appropriately addresses the protection of public health and the environment; and

WHEREAS, the City of Lockport did not cause, contribute, or have any involvement with the acts and/or omissions that led to the contamination on the Site; and

WHEREAS, this Agreement sets forth mutually agreeable principles which are intended to ensure cooperation between NYSDEC and the City of Lockport, to establish an understanding of appropriate liability protection for the City of Lockport, which shall not be deemed an Owner or Operator for purposes of liability for past releases of hazardous substances and wastes on the Site. The objective of this Agreement is to ensure that full consideration is afforded these interests, and that the individual missions and responsibilities of each Party are fully considered; and

NOW, THEREFORE, it is agreed among NYSDEC and the City of Lockport:

ARTICLE I PARTIES

1.1 For purposes of this Agreement the following terms shall apply:

- 1.1.1 The City of Lockport shall mean the municipality whose focused on the safety and livelihood of its residents, business development, and promoting growth in the City.
- 1.1.2 The NYS Department of Environmental Conservation is the Department that has jurisdiction over Inactive Hazardous Waste Disposal Sites, including the Peter’s Dry-Cleaning Site.

ARTICLE II COOPERATION

2.1 The Parties shall keep each other informed of and consult on matters of common interest, which are likely to lead to the conveyance of the property to a third party willing to maintain certain Institutional Controls and Engineering Controls (“IC/EC”) on the Site.

2.2 The Parties agree to facilitate the transfer of ownership and redevelopment of the

Site.

2.3 Consultation and exchange of information and documents under this Article shall be without prejudice to arrangements which may be needed to safeguard the confidential and restricted character of certain information and documents.

2.4 The Parties agree to provide access to the Site as outlined in the Environmental Easement.

ARTICLE III COVENANT NOT TO SUE AND RESERVATION OF RIGHTS

3.1 Subject to Sections 3.3 and 3.4 below, NYSDEC covenants not to sue or seek payment for past or future costs of response at the Peter's Dry-Cleaning Site from the City of Lockport, and acknowledges that the City of Lockport is not a "responsible" or liable party, owner or operator as such terms are defined in New York State Environmental Conservation Law ("ECL") (ECL §27-1301 et seq.) and the federal Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. §9601 et seq.) and/or the Resource Conservation and Recovery Act ("RCRA", 42 U.S.C. Ch. 82 § 6901 et seq.).

3.2 The City of Lockport represents that it did not cause, create, contribute to, influence, direct, oversee or manage any action or omission that resulted in the release of hazardous substances on the Site, and further state that it will not convey the Site to any party that caused or contributed to contamination conditions on the Site. The Parties to this MOU did not own nor conduct business operations on the Peter's Dry-Cleaning Site resulting in the release of hazardous substance at the Site.

3.3 This Agreement shall be construed to provide liability protection to the City of Lockport upon execution of the Environmental Easement.

3.4 A) The liability protection provisions, the municipal exemption of liability provisions set forth in both ECL Article 27, Title 13 and in CERCLA, and the Covenant Not to sue are available to the City of Lockport because they were not involved with the release, disposal or discharge of contamination on the Site.

B) NYSDEC hereby reserves its respective rights concerning:

1) circumstances where the City of Lockport causes the use of the Property to change from the contemplated use to one requiring a greater level of cleanup of remaining contamination before that use can be implemented with sufficient protection of human health and the environment.

2) taking action based on fraud or gross negligence committed by the City of Lockport that causes a release of contamination to the environment.

ARTICLE IV

TERM, TERMINATION AND AMENDMENT

4.1 This Agreement is effective upon execution by the NYSDEC and shall be binding upon and inure to the benefit of every Party that signs the Agreement. This Agreement may be terminated or amended only in writing by all Parties to the Agreement.

4.2 This Agreement shall apply only to the Property listed on the attached Schedule A.

4.3 Article III shall survive any termination of this Agreement relative to the Property listed in Schedule A.

ARTICLE V NOTICES AND ADDRESSES

Any notice or request required or permitted to be given or made under this Agreement shall be in writing and shall be deemed sufficient if sent by regular first-class mail and certified mail, or personally delivered during business hours, to the addresses for the parties set forth above or by e-mail by agreement of the parties.

ARTICLE VI MISCELLANEOUS

6.1 This Agreement comprises the complete understanding of the Parties in respect of the subject matter in this Agreement.

6.2 This Agreement may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first written above.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION:

By: Andrew Guglielmi

Name: Andrew Guglielmi

Title: Director, Division of Environmental Remediation

Date: December 2, 2024

CITY OF LOCKPORT

By: ~~David Buckley~~

John Lombardi, III

MAYOR

Title: ~~Corporation Counsel~~ Mayor

Date: November 4, 2024

Schedule A – Site by Address & Tax Parcel Number

316 Willow Street, Lockport, NY (Parcel 123.05-2-54)

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Lockport, County of Niagara and State of New York, known and distinguished as being part of Lot Number 11, Section 14, Township 14, and Range 6 of the Holland Land Company's Land, which is bounded and described as follows:

BEGINNING at a point on the south line of Willow Street, said point being 162' west of the west line of Pine Street;

THENCE westerly along the south line of Willow Street 89' to a point;

THENCE southerly on a line parallel to Pine Street, 198' to a point;

THENCE easterly on a line parallel to Willow Street 55' to a point;

THENCE northerly on a line parallel to Pine Street, 66' to a point;

THENCE easterly on a line parallel to Willow Street, 34' to a point;

THENCE northerly 132' to the point of beginning.

**Combined Real Estate Transfer Tax Return,
Credit Line Mortgage Certificate, and
Certification of Exemption from the
Payment of Estimated Personal Income Tax**

See Form TP-584-I, Instructions for Form TP-584, before completing this form. Print or type.

Schedule A – Information relating to conveyance

Grantor/Transferor	Name (if individual, last, first, middle initial) (☐ mark an X if more than one grantor)	Social Security number (SSN)
☐ Individual	City of Lockport	
☐ Corporation	Mailing address	SSN
☐ Partnership	One Lock's Plaza	
☐ Estate/Trust	City State ZIP code	Employer Identification Number (EIN)
☐ Single member LLC	Lockport NY	
☐ Multi-member LLC	Single member's name if grantor is a single member LLC (see instructions)	Single member EIN or SSN
☐ Other		
Grantee/Transferee	Name (if individual, last, first, middle initial) (☐ mark an X if more than one grantee)	SSN
☐ Individual	NYS Department of Environmental Conservation	
☐ Corporation	Mailing address	SSN
☐ Partnership	625 Broadway	
☐ Estate/Trust	City State ZIP code	EIN
☐ Single member LLC	Albany NY 12233	14-6013200
☐ Multi-member LLC	Single member's name if grantee is a single member LLC (see instructions)	Single member EIN or SSN
☒ Other		

Location and description of property conveyed

Tax map designation -- Section, block & lot (include dots and dashes)	SWIS code (six digits)	Street address	City, town, or village	County
123.05-2-54		316 Willow Street	Lockport	Niagara

Type of property conveyed (mark an X in applicable box)

1 ☐ One- to three-family house	6 ☐ Apartment building	Date of conveyance <table border="1"><tr><td>month</td><td>day</td><td>year</td></tr></table>	month	day	year	Percentage of real property conveyed which is residential real property _____ % (see instructions)
month	day		year			
2 ☐ Residential cooperative	7 ☐ Office building					
3 ☐ Residential condominium	8 ☐ Four-family dwelling					
4 ☐ Vacant land	9 ☐ Other _____					
5 ☐ Commercial/industrial						

**Condition of conveyance
(mark an X in all that apply)**

a. ☐ Conveyance of fee interest	f. ☐ Conveyance which consists of a mere change of identity or form of ownership or organization (attach Form TP-584.1, Schedule F)	i. ☐ Option assignment or surrender
b. ☐ Acquisition of a controlling interest (state percentage acquired _____ %)	g. ☐ Conveyance for which credit for tax previously paid will be claimed (attach Form TP-584.1, Schedule G)	m. ☐ Leasehold assignment or surrender
c. ☐ Transfer of a controlling interest (state percentage transferred _____ %)	h. ☐ Conveyance of cooperative apartment(s)	n. ☐ Leasehold grant
d. ☐ Conveyance to cooperative housing corporation	i. ☐ Syndication	o. ☒ Conveyance of an easement
e. ☐ Conveyance pursuant to or in lieu of foreclosure or enforcement of security interest (attach Form TP-584.1, Schedule E)	j. ☐ Conveyance of air rights or development rights	p. ☐ Conveyance for which exemption from transfer tax claimed (complete Schedule B, Part 3)
	k. ☐ Contract assignment	q. ☐ Conveyance of property partly within and partly outside the state
		r. ☐ Conveyance pursuant to divorce or separation
		s. ☒ Other (describe) <u>Enviro. Easement</u>

For recording officer's use	Amount received	Date received	Transaction number
	Schedule B, Part 1 \$ _____		
	Schedule B, Part 2 \$ _____		

Schedule B – Real estate transfer tax return (Tax Law Article 31)**Part 1 – Computation of tax due**

- 1 Enter amount of consideration for the conveyance (if you are claiming a total exemption from tax, mark an X in the Exemption claimed box, enter consideration and proceed to Part 3) ☒ **Exemption claimed**
- 2 Continuing lien deduction (see instructions if property is taken subject to mortgage or lien)
- 3 Taxable consideration (subtract line 2 from line 1)
- 4 Tax: \$2 for each \$500, or fractional part thereof, of consideration on line 3
- 5 Amount of credit claimed for tax previously paid (see instructions and attach Form TP-584.1, Schedule G)
- 6 Total tax due* (subtract line 5 from line 4)

1.		
2.		
3.		
4.		
5.		
6.		

Part 2 – Computation of additional tax due on the conveyance of residential real property for \$1 million or more

- 1 Enter amount of consideration for conveyance (from Part 1, line 1)
- 2 Taxable consideration (multiply line 1 by the percentage of the premises which is residential real property, as shown in Schedule A) ...
- 3 Total additional transfer tax due* (multiply line 2 by 1% (.01))

1.		
2.		
3.		

Part 3 – Explanation of exemption claimed on Part 1, line 1 (mark an X in all boxes that apply)

The conveyance of real property is exempt from the real estate transfer tax for the following reason:

- a. Conveyance is to the United Nations, the United States of America, New York State, or any of their instrumentalities, agencies, or political subdivisions (or any public corporation, including a public corporation created pursuant to agreement or compact with another state or Canada) a ☒
- b. Conveyance is to secure a debt or other obligation..... b ☐
- c. Conveyance is without additional consideration to confirm, correct, modify, or supplement a prior conveyance..... c ☐
- d. Conveyance of real property is without consideration and not in connection with a sale, including conveyances conveying realty as bona fide gifts..... d ☐
- e. Conveyance is given in connection with a tax sale..... e ☐
- f. Conveyance is a mere change of identity or form of ownership or organization where there is no change in beneficial ownership. (This exemption cannot be claimed for a conveyance to a cooperative housing corporation of real property comprising the cooperative dwelling or dwellings.) Attach Form TP-584.1, Schedule F f ☐
- g. Conveyance consists of deed of partition..... g ☐
- h. Conveyance is given pursuant to the federal Bankruptcy Act..... h ☐
- i. Conveyance consists of the execution of a contract to sell real property, without the use or occupancy of such property, or the granting of an option to purchase real property, without the use or occupancy of such property..... i ☐
- j. Conveyance of an option or contract to purchase real property with the use or occupancy of such property where the consideration is less than \$200,000 and such property was used solely by the grantor as the grantor's personal residence and consists of a one-, two-, or three-family house, an individual residential condominium unit, or the sale of stock in a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential cooperative apartment..... j ☐
- k. Conveyance is not a conveyance within the meaning of Tax Law, Article 31, § 1401(e) (attach documents supporting such claim) k ☐

* The total tax (from Part 1, line 6 and Part 2, line 3 above) is due within 15 days from the date of conveyance. Make check(s) payable to the county clerk where the recording is to take place. For conveyances of real property within New York City, use Form TP-584-NYC. If a recording is not required, send this return and your check(s) made payable to the **NYS Department of Taxation and Finance**, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-0045. If not using U.S. Mail, see Publication 55, *Designated Private Delivery Services*.

Schedule C – Credit Line Mortgage Certificate (Tax Law Article 11)

Complete the following only if the interest being transferred is a fee simple interest.

This is to certify that: (mark an X in the appropriate box)

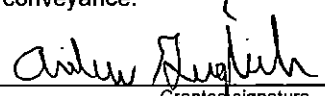
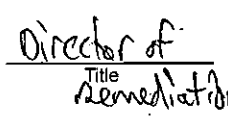
1. ☐ The real property being sold or transferred is not subject to an outstanding credit line mortgage.
 2. ☐ The real property being sold or transferred is subject to an outstanding credit line mortgage. However, an exemption from the tax is claimed for the following reason:
 - a ☐ The transfer of real property is a transfer of a fee simple interest to a person or persons who held a fee simple interest in the real property (whether as a joint tenant, a tenant in common or otherwise) immediately before the transfer.
 - b ☐ The transfer of real property is (A) to a person or persons related by blood, marriage or adoption to the original obligor or to one or more of the original obligors or (B) to a person or entity where 50% or more of the beneficial interest in such real property after the transfer is held by the transferor or such related person or persons (as in the case of a transfer to a trustee for the benefit of a minor or the transfer to a trust for the benefit of the transferor).
 - c ☐ The transfer of real property is a transfer to a trustee in bankruptcy, a receiver, assignee, or other officer of a court.
 - d ☐ The maximum principal amount secured by the credit line mortgage is \$3 million or more, and the real property being sold or transferred is not principally improved nor will it be improved by a one- to six-family owner-occupied residence or dwelling.

Note: for purposes of determining whether the maximum principal amount secured is \$3 million or more as described above, the amounts secured by two or more credit line mortgages may be aggregated under certain circumstances. See TSB-M-96(6)-R for more information regarding these aggregation requirements.

 - e ☐ Other (attach detailed explanation).
3. ☐ The real property being transferred is presently subject to an outstanding credit line mortgage. However, no tax is due for the following reason:
 - a ☐ A certificate of discharge of the credit line mortgage is being offered at the time of recording the deed.
 - b ☐ A check has been drawn payable for transmission to the credit line mortgagee or mortgagee's agent for the balance due, and a satisfaction of such mortgage will be recorded as soon as it is available.
4. ☐ The real property being transferred is subject to an outstanding credit line mortgage recorded in _____ (insert liber and page or reel or other identification of the mortgage). The maximum principal amount of debt or obligation secured by the mortgage is _____. No exemption from tax is claimed and the tax of _____ is being paid herewith. (Make check payable to county clerk where deed will be recorded.)

Signature (both the grantors and grantees must sign)

The undersigned certify that the above information contained in Schedules A, B, and C, including any return, certification, schedule, or attachment, is to the best of their knowledge, true and complete, and authorize the person(s) submitting such form on their behalf to receive a copy for purposes of recording the deed or other instrument effecting the conveyance.

_____ Grantor signature	_____ Title	 _____ Grantee signature	 _____ Title
_____ Grantor signature	_____ Title	_____ Grantee signature	_____ Title

Reminder: Did you complete all of the required information in Schedules A, B, and C? Are you required to complete Schedule D? If you marked e, f, or g in Schedule A, did you complete Form TP-584.1? Have you attached your check(s) made payable to the county clerk where recording will take place? If no recording is required, send this return and your check(s), made payable to the **NYS Department of Taxation and Finance**, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-0045. If not using U.S. Mail, see Publication 55, *Designated Private Delivery Services*.

Schedule D – Certification of exemption from the payment of estimated personal income tax (Tax Law, Article 22, § 663)

Complete the following only if a fee simple interest or a cooperative unit is being transferred by an individual or estate or trust.

If the property is being conveyed by a referee pursuant to a foreclosure proceeding, proceed to Part 2, mark an X in the second box under *Exemption for nonresident transferors/sellers*, and sign at bottom.

Part 1 – New York State residents

If you are a New York State resident transferor/seller listed in Form TP-584, Schedule A (or an attachment to Form TP-584), you must sign the certification below. If one or more transferor/seller of the real property or cooperative unit is a resident of New York State, each resident transferor/seller must sign in the space provided. If more space is needed, photocopy this Schedule D and submit as many schedules as necessary to accommodate all resident transferors/sellers.

Certification of resident transferors/sellers

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor/seller as signed below was a resident of New York State, and therefore is not required to pay estimated personal income tax under Tax Law § 663(a) upon the sale or transfer of this real property or cooperative unit.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

Note: A resident of New York State may still be required to pay estimated tax under Tax Law § 685(c), but not as a condition of recording a deed.

Part 2 – Nonresidents of New York State

If you are a nonresident of New York State listed as a transferor/seller in Form TP-584, Schedule A (or an attachment to Form TP-584) but are not required to pay estimated personal income tax because one of the exemptions below applies under Tax Law § 663(c), mark an X in the box of the appropriate exemption below. If any one of the exemptions below applies to the transferor/seller, that transferor/seller is not required to pay estimated personal income tax to New York State under Tax Law § 663. Each nonresident transferor/seller who qualifies under one of the exemptions below must sign in the space provided. If more space is needed, photocopy this Schedule D and submit as many schedules as necessary to accommodate all nonresident transferors/sellers.

If none of these exemption statements apply, you must complete Form IT-2663, *Nonresident Real Property Estimated Income Tax Payment Form*, or Form IT-2664, *Nonresident Cooperative Unit Estimated Income Tax Payment Form*. For more information, see *Payment of estimated personal income tax*, on Form TP-584-I, page 1.

Exemption for nonresident transferors/sellers

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor/seller (grantor) of this real property or cooperative unit was a nonresident of New York State, but is not required to pay estimated personal income tax under Tax Law § 663 due to one of the following exemptions:

- ☐ The real property or cooperative unit being sold or transferred qualifies in total as the transferor's/seller's principal residence (within the meaning of Internal Revenue Code, section 121) from _____ Date _____ to _____ Date _____ (see instructions).
- ☐ The transferor/seller is a mortgagor conveying the mortgaged property to a mortgagee in foreclosure, or in lieu of foreclosure with no additional consideration.
- ☐ The transferor or transferee is an agency or authority of the United States of America, an agency or authority of New York State, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association, or a private mortgage insurance company.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

APPENDIX B

List of Site Contacts

APPENDIX B – LIST OF SITE CONTACTS

Name	Contact Information	Phone/Email Address
Site Owner (Temporary Incidents of Ownership)	City of Lockport 1 Lock's Plaza Lockport, NY 14094	(716) 439-6670
Remedial Party	Jeffrey Dyber NYSDEC -DER 625 Broadway Albany NY 12233-7017	(518) 402-9621 jeffrey.dyber@dec.ny.gov
NYSDEC DER Project Manager	Jasmine Stefansky NYSDEC -DER 625 Broadway Albany NY 12233-7020	(518) 402-9575 jasmine.stefansky@dec.ny.gov
NYSDOH Project Manager	Daniel Tucholski	(518) 486-7016 daniel.tucholski@health.ny.gov
NYSDEC Site Control	Kelly Lewandowski	518-402-9569, kelly.lewandowski@dec.ny.gov
Qualified Environmental Professional	Chuck Staples, EEEG Project Manager	207-910-1122 charles.staples@wsp.com

APPENDIX C

Responsibilities of Owner and Remedial Party

Responsibilities

The responsibilities for implementing the Site Management Plan (“SMP”) for the Peters Dry Cleaning site (the “site”), number 932128, are divided between the site owner(s) and a Remedial Party, as defined below. The owner(s) is/are currently listed as: The City of Lockport, One Lock’s Plaza, Lockport, NY 14094 (the “owner”).

Solely for the purposes of this document and based upon the facts related to a particular site and the remedial program being carried out, the term Remedial Party (“RP”) refers to any of the following: certificate of completion holder, volunteer, applicant, responsible party, and, in the event the New York State Department of Environmental Conservation (“NYSDEC”) is carrying out remediation or site management, the NYSDEC and/or an agent acting on its behalf. The RP is:
NYSDEC, 625 Broadway, Albany, NY 12233.

Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the site.

Site Owner’s Responsibilities:

- 1) The owner shall follow the provisions of the SMP as they relate to future construction and excavation at the site.
- 2) In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in an Environmental Easement, remain in place and continue to be complied with. The owner shall provide a written certification

to the RP, upon the RP's request, in order to allow the RP to include the certification in the site's Periodic Review Report (PRR) certification to the NYSDEC.

- 3) In the event the site is delisted, the owner remains bound by the Environmental Easement, and shall submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.
- 4) The owner shall grant access to the site to the RP and the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.
- 5) The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. If damage to the remedial components or vandalism is evident, the owner shall notify the site's RP and the NYSDEC in accordance with the timeframes indicated in Section 1.3-Notifications.
- 6) If some action or inaction by the owner adversely impacts the site, the owner must notify the site's RP and the NYSDEC in accordance with the time frame indicated in Section 1.3- Notifications, and coordinate the performance of necessary corrective actions with the RP.
- 7) The owner must notify the RP and the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the site property. 6 NYCRR contains notification requirements applicable to any construction or activity changes and changes in ownership. Among the notification requirements is the following: Sixty days prior written notification must be made to the NYSDEC. Notification is to be submitted to the NYSDEC Division of Environmental Remediation's Site Control Section. Notification requirements for a change in use are detailed in Section 1.3 of the SMP. A change of use includes, but is not limited to, any activity that may increase direct human or environmental exposure (e.g., day care, school or park). A 60-Day Advance Notification Form and Instructions are found at <http://www.dec.ny.gov/chemical/76250.html>.

- 8) If an occupied structure is constructed on the Site, it will include a vapor mitigation system, unless sampling and agreement with the NYSDEC and NYSDOH indicate that the system is not necessary. Until such time as the NYSDEC deems the vapor mitigation system unnecessary, the owner shall operate the system, pay for the utilities for the system's operation, and report any maintenance issues to the RP and the NYSDEC.
- 9) In accordance with the tenant notification law, within 15 days of receipt, the owner must supply a copy of any vapor intrusion data, that is produced with respect to structures and that exceeds NYSDOH or OSHA guidelines on the site, whether produced by the NYSDEC, RP, or owner, to the tenants on the property. The owner must otherwise comply with the tenant and occupant notification provisions of Environmental Conservation Law Article 27, Title 24.

Remedial Party Responsibilities

- 1) The RP must follow the SMP provisions regarding any construction and/or excavation it undertakes at the site.
- 2) The RP shall report to the NYSDEC all activities required for remediation, operation, maintenance, monitoring, and reporting. Such reporting includes, but is not limited to, periodic review reports and certifications, electronic data deliverables, corrective action work plans and reports, and updated SMPs.
- 3) Before accessing the site property to undertake a specific activity, the RP shall provide the owner advance notification that shall include an explanation of the work expected to be completed. The RP shall provide to (i) the owner, upon the owner's request, (ii) the NYSDEC, and (iii) other entities, if required by the SMP, a copy of any data generated during the site visit and/or any final report produced.
- 4) If the NYSDEC determines that an update of the SMP is necessary, the RP shall update the SMP and obtain final approval from the NYSDEC. Within 5 business days after NYSDEC approval, the RP shall submit a copy of the approved SMP to the owner(s).
- 5) The RP shall notify the NYSDEC and the owner of any changes in RP ownership and/or control and of any changes in the party/entity responsible for the operation, maintenance, and monitoring of and reporting with respect to any remedial system

(Engineering Controls). The RP shall provide contact information for the new party/entity. Such activity constitutes a Change of Use pursuant to 375-1.11(d) and requires 60-days prior notice to the NYSDEC. A 60-Day Advance Notification Form and Instructions are found at <http://www.dec.ny.gov/chemical/76250.html> .

- 6) The RP shall notify the NYSDEC of any damage to or modification of the systems as required under Section 1.3- Notifications of the SMP.
- 7) The RP is responsible for the proper maintenance of any installed vapor intrusion mitigation systems associated with the site, as required in Section 5.3 (Operation and Monitoring Plan) of the SMP.
- 8) Prior to a change in use that impacts the remedial system or requirements and/or responsibilities for implementing the SMP, the RP shall submit to the NYSDEC for approval an amended SMP.
- 9) Any change in use, change in ownership, change in site classification (*e.g.*, delisting), reduction or expansion of remediation, and other significant changes related to the site may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or updated legal documents. The RP shall contact the NYSDEC project manager to discuss the need to update such documents.

Change in RP ownership and/or control and/or site ownership does not affect the RP's obligations with respect to the site unless a legally binding document executed by the NYSDEC releases the RP of its obligations.

Future site owners and RPs and their successors and assigns are required to carry out the activities set forth above.

APPENDIX D

Monitoring Well Boring and Construction Logs

SOIL BORING LOG



511 Congress Street, Portland Maine 04101

Project Name: Peters Dry Cleaner Boring ID: MLPS-01
 Project Location: Lockport NV Page No. 1
 Project No.: 3616206103 Client: 11/4/DEC of: 1
 Boring Location: Refusal Depth: 11' Total Depth: 11 Bore Hole OD: 2.5
 Weather: 70°F Clear Soil Drilled: 1' Drilling Method: Direct Push Casing Size: 2.5
 Subcontractor: Lg Beller Rock Drilled: — Protection Level: D Sampler: Acetate / Gneoph
 Driller: Kasim Date Started: 9/18/23 Date Completed: 9/18/23 Sampler ID/OD: 1.25
 Rig Type/Model: 6620 Logged By: B Paulus Checked By: J. Fletcher
 Reference Elevation: Ground Water Level: 27' Time: 1000

Drilling Information				Sample Information				Sample Description and Classification	USCS Classification	Remarks
Depth (feet bgs)	Sample Number	Penetration (ft) / Recovery (ft)	Blow Counts	N Value	PID Field Screening (ppm)	PID Head Space Reading (ppm)	Analytical Sample Depth (ft)			
0	R1	5/4	NA		6.2		NA	0-1 Med brown top soil / A little some roots	SM	Begin 080
1					16.2			2-3.5 Medium brown - tan dry clay	CL	
5					1.0			3.5-4.5 Reddish brown clayey silt dry		
					0.7			4.5-5 moist reddish brown clayey silt		
5	R2	5/4.5			0.1			5-9.5 Saturated med brown silt with some clay	ML	wt at 27'
					0.1					
					0.1					
10					0.4			9.5-10 Brown medium sand with silt	SM	
					0.0					
11	R3	1/1			18.5			10-11 Med. sand with some silt & rounded gravel, wet.	SM/SC	End 755
								Refusal		

NOTES:

WELL/PIEZOMETER CONSTRUCTION RECORD FLUSHMOUNT

LOCATION ID:

MWPS-1

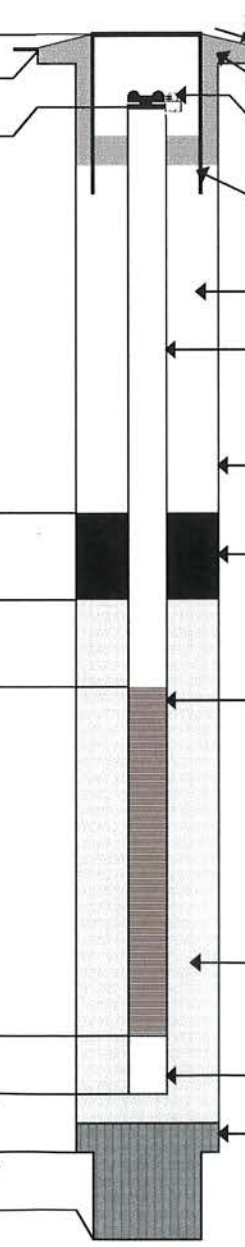
Project Name: Peters Dry Cleaner
 Project Location: Lockport NY
 Project Number: 3616206103 Task Number: 03
 Subcontractor: La Bella Drilling Method: Dr. flush
 Development Method: NA Development Date: None
 Bucking Posts/Ballards: None
 Notes: Elevation not a true survey
but taken from Bed Elf GPS

Date Started: 9/18/23 Date Completed: 9/21/23
 Logged By: B. J. J. J.
 Checked By: JFletcher Checked Date: 9/27/23

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser
 MP Elevation (ft): 626

Elevations are Approximate

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation	0	626	 Slope Away
Ground Surface Elevation	0	626	
Riser Pipe (Top)	-3	625.7	
			Surface Seal Type: <u>Plastic Casing + Concrete</u>
			Lock Identification: <u>✓</u>
			Stickup Casing Diameter: <u>4"</u>
			Backfill/Grout Type: <u>NA</u>
			Riser Pipe Type: <u>PVC</u>
			Riser Pipe ID: <u>1"</u>
			Borehole Diameter: <u>2.5</u>
Top of Well Seal	0.5	625.5	Type of Seal: <u> Bentonite Chips </u>
Top of Sand Pack	5	621	
Top of Screen	6'	620	Screen Type: <u>PVC</u>
			Screen ID: <u>1"</u>
			Screen Slot Size: <u>0.010</u>
			Screen Length: <u>5'</u>
Base of Screen	11'	615	Filter/Sand Pack Type: <u>00 Sand + Native</u>
End Cap	11.5	614.5	Sump: <u>Native</u>
Drilled Depth	11.5'	614.5	Fallback/Backfill: <u>Native</u>
Bottom of Exploration	11.5	614.5	
Bedrock Surface	NA	✓	

NOT TO SCALE

SOIL BORING LOG



511 Congress Street, Portland Maine 04101

Project Name: <u>Peters Dry Cleaner</u>	Boring ID: <u>MWPS2</u>
Project Location: <u>Lockport NY</u>	Page No. <u>1</u>
Project No.: <u>3616206103</u> Client: <u>NYS DEC</u>	of: <u>1</u>
Boring Location: <u>NW of MW 101</u>	Refusal Depth: <u>10</u>
Weather: <u>70°F clear</u>	Soil Drilled: <u>10</u>
Subcontractor: <u>LA Bella</u>	Drilling Method: <u>Dr push</u>
Driller: <u>Kashner</u>	Rock Drilled: <u>-</u>
Rig Type/Model: <u>6620</u>	Protection Level: <u>0</u>
Reference Elevation: <u>Ground</u>	Date Started: <u>9/18/23</u>
	Date Completed: <u>9/18/23</u>
	Logged By: <u>B. Paulus</u>
	Checked By: <u>J. Fletcher</u>
	Water Level: <u>~7'</u>
	Time: <u>1045</u>

Drilling Information					Sample Information		Sample Description and Classification	USCS Classification	Remarks
Depth (feet bgs)	Sample Number	Penetration (ft)/ Recovery (ft)	Blow Counts	N Value	PID Field Screening (ppm)	PID Head Space Reading (ppm)	Analytical Sample Depth (ft)		
0	R1	5/3	1	1	0.5		0-1	GP/GH	Reg. h at 10/14
					9.5		2-5	ML	
5					0.2				
5	R2	5/5			0.2		5-6.5	ML	
					0		7-10	SC	WT ~ 7'
					0			SW	
10					0				
					0				
							Refusal		Complete 1030

NOTES:

WELL/PIEZOMETER CONSTRUCTION RECORD FLUSHMOUNT

LOCATION ID:

MWPS - 2

Project Name: Petes Dry Cleaner
 Project Location: Lockport NY
 Project Number: 366206103 Task Number 03
 Subcontractor: Labella Drilling Method: Direct Push
 Development Method: NA Development Date: None
 Bucking Posts/Ballards: None
 Notes: Elevation is estimate from "Bed EIP"
GPS unit + not a true survey point

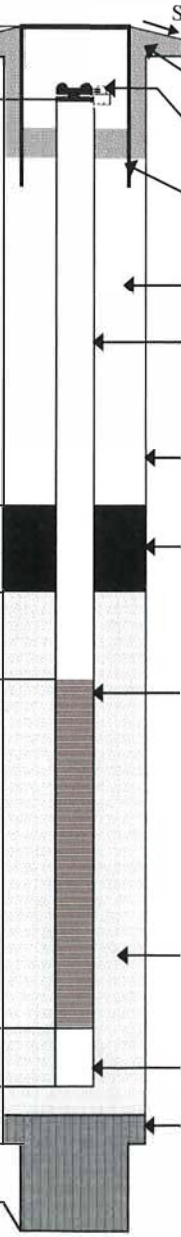
Date Started: 9/18/23 Date Completed: 9/21/23
 Logged By: Spencer
 Checked By: J Fletcher Checked Date: 9/27/23

Measuring Point Information

Measuring Point (MP) Type: Top of Riser Ground

MP Elevation (ft): 256 623

Elevations are Approximate

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation	<u>0</u>	<u>620.7</u>	 Slope Away
Ground Surface Elevation	<u>0'</u>	<u>623</u>	
Riser Pipe (Top)	<u>.3</u>	<u>622.7</u>	
			Surface Seal Type: <u>Plastic box + concrete</u>
			Lock Identification: <u>NA</u>
			Stickup Casing Diameter: <u>4"</u>
			Backfill/Grout Type: <u>NA</u>
			Riser Pipe Type: <u>PVC</u>
			Riser Pipe ID: <u>1"</u>
			Borehole Diameter: <u>2.5</u>
Top of Well Seal	<u>0.5</u>	<u>622.5</u>	Type of Seal: <u>Reinforced clips</u>
Top of Sand Pack	<u>3'</u>	<u>620</u>	
Top of Screen	<u>5'</u>	<u>618</u>	Screen Type: <u>PVC</u>
			Screen ID: <u>1"</u>
			Screen Slot Size: <u>0.010</u>
			Screen Length: <u>5'</u>
Base of Screen	<u>10</u>	<u>613</u>	Filter/Sand Pack Type: <u>00 sand</u>
End Cap	<u>10.5</u>	<u>612.5</u>	Sump: <u>Native</u>
Drilled Depth	<u>10.5</u>	<u>612.5</u>	Fallback/Backfill: <u>Native</u>
Bottom of Exploration	<u>10.5</u>	<u>612.5</u>	
Bedrock Surface	<u>NA</u>	<u>NA</u>	

NOT TO SCALE



511 Congress Street, Portland Maine 04101

SOIL BORING LOG

Project Name: Peters Dry CleanerBoring ID: MWPS-3Project Location: Lakeport NYPage No. 1Project No.: 361206103Client: NYSDECof: 1Boring Location: NW of MWPS 02Refusal Depth: 10Total Depth: 10Bore Hole OD: 2.5Weather: FairSoil Drilled: 10Drilling Method: DrushCasing Size: NASubcontractor: LaBellaRock Drilled: —Protection Level: DSampler: Dual tubeDriller: KeslerDate Started: 9/18/23Date Completed: 9/18/23Sampler ID: 1.25Rig Type/Model: 6670Logged By: B. PaulusChecked By: J. FletcherReference Elevation: GroundWater Level: ~5'Time: 1015

Drilling Information					Sample Information			Sample Description and Classification	USCS Classification	Remarks
Depth (feet bgs)	Sample Number	Penetration (ft) / Recovery (ft)	Blow Counts	N Value	PID Field Screening (ppm)	PID Head Space Reading (ppm)	Analytical Sample Depth (ft)			
0	R1	5 1/4	NA		20.5		NA	0-1 Grey f.f./Gravel	GM	Begin 1000
					8.0			2-4 Med brown fine sand with silt + coarse angular sm. gravel, silty clay lens at 2.5'	SC	
					2.4				CL	
5					4.0			4-5 Red med plasticity clay silty clay	CL	
5	R2	5/4			1.4			5-6 Saturated med brown silt	ML	WT@ ~5'
					0.5			6-7 dense, wet compacted reddish clayey silt	ML	
					0.0			7-10 Saturated brown fine sand with silt.	ML	
10					0.0			sand/gravel lens at 7.5' + 9.5'	SW	
								Refusal		End 1012

NOTES:

WELL/PIEZOMETER CONSTRUCTION RECORD FLUSHMOUNT

LOCATION ID:

MWPS-3

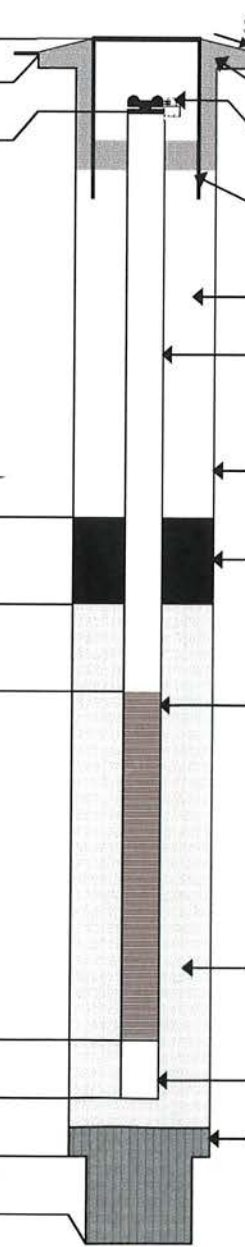
Project Name: Peters Dry cleaner
 Project Location: Lakeport NY
 Project Number: 3616206103 Task Number: _____
 Subcontractor: La Bella Drilling Method: Direct Push
 Development Method: NA Development Date: None
 Bucking Posts/Ballards: None
 Notes: None

Date Started: 9/18/23 Date Completed: 9/21/23
 Logged By: B. Paulus
 Checked By: J. Fletcher Checked Date: 9/27/23

Measuring Point Information

Measuring Point (MP) Type: Top of Riser
 MP Elevation (ft): 621

Elevations are Approximate

Item	Depth BMP (ft)	Elevation (ft)	Description
Surface Casing Elevation	0'	621	 Slope Away Surface Seal Type: <u>Plastic Casing & Concrete</u> Lock Identification: _____ Stickup Casing Diameter: <u>4"</u> Backfill/Grout Type: <u>NA</u> Riser Pipe Type: <u>PVC</u> Riser Pipe ID: <u>1"</u> Borehole Diameter: <u>2-5</u> Type of Seal: <u>Bentonite</u> Screen Type: <u>PVC</u> Screen ID: <u>1"</u> Screen Slot Size: <u>0.010</u> Screen Length: <u>5'</u> Filter/Sand Pack Type: <u>00 Sand</u> Sump: _____ Fallback/Backfill: <u>Native</u>
Ground Surface Elevation	0	621	
Riser Pipe (Top)	0.3	620.7	
Top of Well Seal	0.5	620.5	
Top of Sand Pack	3'	618	
Top of Screen	5'	616	
Base of Screen	10'	611	
End Cap	10.5	610.5	
Drilled Depth	10.5	610.5	
Bottom of Exploration	10.5	610.5	
Bedrock Surface	NA	—	

NOT TO SCALE

CONTRACTOR		TREC Environmental, Inc		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA DATUM NA	
START DATE		3/5/2009		END DATE		3/5/2009	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		J. Davide	

WATER LEVEL DATA					TYPE OF DRILL RIG	
DATE	TIME	WATER	CASING	NOTES	Geoprobe 6620 DT track mounted rig	
3/5/2009			@ surface	road box	2" diameter by 48" long	
					OVERBURDEN SAMPLING METHOD Direct push	
					ROCK DRILLING METHOD NA	

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M	
	Sample Number	DEPTH (FT)	RECOVERY (%)					
1	S-1	0-2	90	TOPSOIL		Concrete & Roadbox	ND	
2				FILL - Dark Brown Clayey SILT, trace Sand, trace Gravel, trace Organic, moist.			Bentonite 0.5 to 1 feet	ND
3	S-2	2-4	90	Reddish Brown Clayey SILT, some Sand, trace Gravel, moist. (Native)			Screen 2 to 12 feet	2
4								
5	S-3	4-6	90	Reddish Brown Silty CLAY, trace Sand, trace Gravel, moist.			Sand 1 to 11 feet	ND
6								
7	S-4	6-8	90	Reddish Brown SILT, little Sand, trace Clay, trace Gravel, moist to wet.			2" borehole	2
8								
9	S-5	8-10	75				1 inch PVC riser	ND
10								
11	S-6	10-12	75	Grades to...wet.				
12				Grades to...some Sand, some Gravel, moist to wet.				
13				End of probe at 12 feet bgs.				
14								
15								
16								
17								
18								
19								
20								
21								

S - Split Spoon Sample C - Rock Core Sample		NOTES: 1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
General Notes: 1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.		

CONTRACTOR		TREC Environmental, Inc.		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA	
START DATE		3/5/2009		END DATE		3/5/2009	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		J. Davide	

WATER LEVEL DATA					TYPE OF DRILL RIG	
DATE	TIME	WATER	CASING	NOTES	Geoprobe 6620 DT track mounted rig	
3/5/2009			@ surface	road box	2" diameter by 48" long	
					OVERBURDEN SAMPLING METHOD	
					Direct push	
					ROCK DRILLING METHOD	
					NA	

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M	
	Sample Number	DEPTH (FT)	RECOVERY (%)					
1	S-1	0-2	95	TOPSOIL		Concrete & Roadbox	ND	
2				FILL - Dark Brown Clayey SILT, trace Sand, trace Gravel, trace Organic, moist.			Bentonite 0.5 to 1 foot	ND
3	S-2	2-4	95	Reddish Brown Clayey SILT, some Sand, trace Gravel, moist. (Native)			Screen 2 to 12 feet	ND
4								ND
5	S-3	4-6	100	Reddish Brown Silty CLAY, trace Sand, trace Gravel, moist.			Sand 1 to 12 feet	ND
6								ND
7	S-4	6-8	100	Reddish Brown SILT, little Sand, trace Clay, trace Gravel, moist to wet.			2" borehole	ND
8								ND
9	S-5	8-10	70				1 inch PVC riser	ND
10								ND
11	S-6	10-12	70	Grades to ... wet.				ND
12				Grades to ... some Sand, some Gravel, moist to wet.				ND
13				End of probe at 12 feet bgs.				ND
14								
15								
16								
17								
18								
19								
20								
21								

S - Split Spoon Sample C - Rock Core Sample		NOTES: 1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
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General Notes:	1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
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CONTRACTOR		TREC Environmental, Inc		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA DATUM NA	
START DATE		3/5/2009		END DATE		3/5/2009	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		J. Davide	

WATER LEVEL DATA					TYPE OF DRILL RIG	
DATE	TIME	WATER	CASING	NOTES	Geoprobe 6620 DT track mounted rig	
3/5/2009			@ surface	road box	2" diameter by 48" long	
					OVERBURDEN SAMPLING METHOD Direct push	
					ROCK DRILLING METHOD NA	

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M	
	Sample Number	DEPTH (FT)	RECOVERY (%)					
1	S-1	0-2	75	TOPSOIL		Concrete & Roadbox	ND	
2				FILL - Dark Brown Clayey SILT, trace Sand, trace Gravel, trace Organic, moist			Bentonite 0.5 to 1 foot	ND
3	S-2	2-4	75	Reddish Brown Clayey SILT, little Sand, trace Gravel, moist (Native)			Screen 2 to 12 feet	ND
4								
5	S-3	4-6	100	Reddish Brown SILT, little Sand, trace Clay, trace Gravel, moist to wet.			Sand 1 to 12 feet	ND
6								
7	S-4	6-8	100	Grades to... Clayey SILT, trace Sand.				ND
8								
9	S-5	8-10	80	Reddish Brown Silty CLAY, trace Sand, trace Gravel, wet.			2" borehole	ND
10								
11	S-6	10-12	80	Grades to... some Sand, some Gravel, moist to wet.			1 inch PVC riser	10
12				End of probe at 12 feet bgs.				
13								
14								
15								
16								
17								
18								
19								
20								
21								

S - Split Spoon Sample C - Rock Core Sample		NOTES:	1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
General Notes:		1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.	

CONTRACTOR		TREC Environmental, Inc.		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA	
START DATE		3/5/2009		END DATE		3/5/2009	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		J. Davide	

WATER LEVEL DATA					TYPE OF DRILL RIG	
DATE	TIME	WATER	CASING	NOTES	Geoprobe 6620 DT track mounted rig	
3/5/2009			@ surface	road box	2" diameter by 48" long	
					OVERBURDEN SAMPLING METHOD	
					Direct push	
					ROCK DRILLING METHOD	
					NA	

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M	
	Sample Number	DEPTH (FT)	RECOVERY (%)					
1	S-1	0-2	50	TOPSOIL		Concrete & Roadbox	ND	
2				FILL - Dark Brown Clayey SILT, trace Sand, trace Gravel, trace Organic, moist			Bentonite 0.5 to 1 foot	ND
3	S-2	2-4	50	Reddish Brown Clayey SILT, little Sand, trace Gravel, moist. (Native)			Screen 2 to 12 feet	ND
4								
5	S-3	4-6	100	Reddish Brown SILT, little Sand, trace Clay, trace Gravel, moist to wet.			Sand 1 to 12 feet	ND
6								
7	S-4	6-8	100	Grades to... Clayey SILT, trace Sand.				3
8								
9	S-5	8-10	80	Grades to... wet.			2" borehole	1
10								
11	S-6	10-12	80				1 inch PVC riser	3
12				Grades to... some Sand, some Gravel, moist to wet.				
13				End of probe at 12 feet bgs.				
14								
15								
16								
17								
18								
19								
20								
21								

S - Split Spoon Sample C - Rock Core Sample		NOTES:	1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
General Notes:		1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.	

CONTRACTOR		TREC Environmental, Inc		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA DATUM NA	
START DATE		3/5/2009		END DATE		3/5/2009	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		J. Davide	

WATER LEVEL DATA				TYPE OF DRILL RIG		Geoprobe 6620 DT track mounted rig	
DATE	TIME	WATER	CASING	NOTES	CASING SIZE AND DIAMETER	2" diameter by 48" long	
3/5/2009			@ surface	road box	OVERBURDEN SAMPLING METHOD	Direct push	
					ROCK DRILLING METHOD	NA	

DEPTH (feet)	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M	
	Sample Number	DEPTH (FT)	RECOVERY (%)					
1	S-1	0-2	100	ASPHALT			ND	
2				Dark Brown Clayey SILT, some Sand, some Gravel, moist (FILL).				1
3	S-2	2-4	100	Reddish Brown Clayey SILT, little Sand, trace Gravel, moist (Native)				ND
4								
5	S-3	4-6	100	Reddish Brown SILT, little Sand, trace Clay, trace Gravel, moist				ND
6								
7	S-4	6-8	100	Grades to... Clayey SILT, trace Sand, moist to wet.				ND
8								
9	S-5	8-10	80	Grades to... wet.				2
10								
11	S-6	10-12	80					21
12				Grades to... some Sand, some Gravel, moist to wet.				
13				End of probe at 12 feet bgs.				
14								
15								
16								
17								
18								
19								
20								
21								

S - Split Spoon Sample C - Rock Core Sample		NOTES:	1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
General Notes:		1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.	

CONTRACTOR		TREC Environmental, Inc		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA	
START DATE		11/17/2009		END DATE		11/17/2009	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		C. Boron	

WATER LEVEL DATA					TYPE OF DRILL RIG	
DATE	TIME	WATER	CASING	NOTES	Geoprobe 6620 DT track mounted rig	
					2" diameter by 48" long	
					OVERBURDEN SAMPLING METHOD	
					Direct push	
					ROCK DRILLING METHOD	
					NA	

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M		
	Sample Number	DEPTH (FT)	RECOVERY (%)						
1	1	0-4	95	Topsoil with Organics			100		
2				Red brown Clayey SILT, trace Sand, trace Gravel, moist.					
3									
4									
5	2	4-8	85	Grades to: ... Brown (decrease in clay content)				197	
6				Brown SILT, little Sand, trace Gravel, moist to wet.					
7									
8									
9	3	8-12	50	Grades to: ... trace Sand, trace Gravel, wet.					117
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
				Gray SILT and Sand, little Gravel, wet, staining, petroleum odor.	200				
				Refusal at 11.2 ft bgs.					

S - Split Spoon Sample	NOTES:	1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
C - Rock Core Sample		

General Notes:	1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
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CONTRACTOR		TREC Environmental, Inc		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA	
START DATE		11/17/2009		END DATE		11/17/2009	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		C. Boron	

WATER LEVEL DATA					TYPE OF DRILL RIG		Geoprobe 6620 DT track mounted rig	
DATE	TIME	WATER	CASING	NOTES	CASING SIZE AND DIAMETER	2" diameter by 48" long		
					OVERBURDEN SAMPLING METHOD	Direct push		
					ROCK DRILLING METHOD	NA		

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M
	Sample Number	DEPTH (FT)	RECOVERY (%)				
1	1	0-4	90	Topsoil with Organics			65
2				FILL- Dark brown SILT & Sand, trace Glass, trace Clay, trace Gravel, moist. FILL			
3				Native - Red brown Clayey SILT, trace Sand, trace Gravel, moist.			
4							
5	2	4-8	50	Brown SILT, trace Sand, moist to wet.			
6							
7							
8							
9	3	8-12	50	Grades to:...little Sand, trace Gravel, wet.			
10							
11							
12							
13	4	12-15.2	40	Brown SAND, some Silt, little Gravel, wet.			
14				Grades to:...some Gravel, trace Silt.			
15							
16				Refusal at 15.2 ft bgs.			
17							
18							
19							
20							
21							

S - Split Spoon Sample		NOTES:	1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
C - Rock Core Sample			

General Notes:	1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
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CONTRACTOR		TREC Environmental, Inc		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA	
START DATE		12/29/2009		END DATE		12/29/2009	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		C. Boron	

WATER LEVEL DATA					TYPE OF DRILL RIG		Geoprobe 6620 DT track mounted rig	
DATE	TIME	WATER	CASING	NOTES	CASING SIZE AND DIAMETER	2" diameter by 48" long		
12/29/2009		9.51			OVERBURDEN SAMPLING METHOD	Direct push		
					ROCK DRILLING METHOD	NA		

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M
	Sample Number	DEPTH (FT)	RECOVERY (%)				
1	1	0-2	40	Topsoil with organics			ND
2				Red brown SILT & CLAY, trace Sand, trace Gravel, moist			
3	2	2-4	40				
4							
5	3	4-6	75	Red brown Clayey SILT, trace Sand, trace Gravel, moist to wet.			
6							
7	4	6-8	75	Red brown SILT, little Sand, trace Gravel, moist to wet. Grades to: wet.			
8							
9	5	8-10	100	Red brown SAND, little Silt, little Gravel, wet.			
10							
11	6	10-12	100				
12							
13	7	12-14	80				
14							
15	8	14-15.4	80				
16				Refusal at 15.4 ft. bgs.			
17							
18							
19							
20							
21							

S - Split Spoon Sample C - Rock Core Sample	NOTES:	1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
General Notes:	1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.	

CONTRACTOR		TREC Environmental, Inc		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA DATUM NA	
START DATE		12/29/2009		END DATE		12/29/2009	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		C. Boron	

D E P T H	WATER LEVEL DATA				TYPE OF DRILL RIG		Geoprobe 6620 DT track mounted rig	
	DATE	TIME	WATER	CASING	NOTES	CASING SIZE AND DIAMETER	2" diameter by 48" long	
	12/29/2009		5.01			OVERBURDEN SAMPLING METHOD	Direct push	
						ROCK DRILLING METHOD	NA	

D E P T H	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M (ppm)
	Sample Number	DEPTH (FT)	RECOVERY (%)				
1	1	0-2	15	Topsoil with organics		Concrete & Roadbox	1.6
2				Red brown SILT & CLAY, trace Sand, trace Gravel, moist		Bentonite 1 to 4 feet	1.6
3	2	2-4	15			Riser to 5 feet	ND
4						Sand 4 to 15 feet	ND
5	3	4-6	70			Screen 5 to 15 feet	ND
6							ND
7	4	6-8	70	Red brown Clayey SILT, trace Sand, trace Gravel, moist to wet.			ND
8							ND
9	5	8-10	50	Red brown SILT and Sand, some Gravel, trace Clay, moist to wet.		2" borehole	ND
10							ND
11	6	10-12	50	Grades to... wet.		1 inch PVC riser	ND
12							ND
13	7	12-14	75				ND
14							ND
15	8	14-15.8	75				ND
16				Refusal at 15.8 ft. bgs.			
17							
18							
19							
20							
21							

S - Split Spoon Sample C - Rock Core Sample	NOTES:	1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
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General Notes:	1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
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CONTRACTOR		TREC Environmental, Inc		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA	
START DATE		12/29/2009		END DATE		12/29/2009	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		C. Boron	

WATER LEVEL DATA					TYPE OF DRILL RIG		Geoprobe 6620 DT track mounted rig	
DATE	TIME	WATER	CASING	NOTES	CASING SIZE AND DIAMETER		2" diameter by 48" long	
12/29/2009		5.52			OVERBURDEN SAMPLING METHOD		Direct push	
					ROCK DRILLING METHOD		NA	

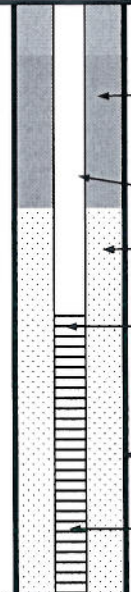
DEPTH T H	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M (ppm)
	Sample Number	DEPTH (FT)	RECOVERY (%)				
1	1	0-2	75	Topsoil with organics Red brown SILT & CLAY, trace Sand, trace Gravel, moist		ND	
2							
3	2	2-4	75				
4							
5	3	4-6	90	Red brown SILT, little Sand, trace Gravel, moist to wet.			ND
6							
7	4	6-8	90				
8							
9	5	8-10	90	Red brown SAND, little Silt, little Gravel, wet.			ND
10							
11	6	10-12	90				
12							
13	7	12-14	70	Red brown SILT, little Sand, trace Gravel, moist to wet.			1
14							
15	8	14-15.5	70				
16							
17				Refusal at 15.5 ft. bgs.			1
18							
19							
20							
21							

S - Split Spoon Sample C - Rock Core Sample	NOTES:	1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
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General Notes:	1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
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CONTRACTOR		TREC Environmental, Inc		BORING LOCATION		See Location Plan	
DRILLER		Jim Agar		GROUND SURFACE ELEVATION		NA DATUM NA	
START DATE		12/29/2009		END DATE		12/29/2009	
GZA GEOENVIRONMENTAL REPRESENTATIVE				C. Boron			

WATER LEVEL DATA					TYPE OF DRILL RIG		Geoprobe 6620 DT track mounted rig	
DATE	TIME	WATER	CASING	NOTES	CASING SIZE AND DIAMETER		2" diameter by 48" long	
12/30/2009		2.89			OVERBURDEN SAMPLING METHOD		Direct push	
					ROCK DRILLING METHOD		NA	

DEPTH	SAMPLE INFORMATION			SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M (ppm)	
	Sample Number	DEPTH (FT)	RECOVERY (%)					
1	1	0-2	10	Topsoil with organics Dark brown SILT & CLAY, trace Sand, trace Gravel, moist		Concrete & Roadbox	1	
2							Bentonite 1 to 4 feet	1
3	2	2-4	10				Riser to 6 feet	1
4							Sand 4 to 11 feet	1
5	3	4-6	5				Screen 6 to 11 feet	1
6								
7	4	6-8	5	Red brown SILT, little Sand, little Clay, trace Gravel, moist to wet.	2" borehole	1 inch PVC riser	1	
8								
9	5	8-10	25					1
10								
11	6	10-11.7	25					1
12								
13				Refusal at 11.7 ft. bgs.				
14								
15								
16								
17								
18								
19								
20								
21								

S - Split Spoon Sample C - Rock Core Sample		NOTES:	1) MiniRAE 2000 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
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General Notes:	1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
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CONTRACTOR		SJB Services		BORING LOCATION		See Location Plan	
DRILLER		Ken Fuller & Steve		GROUND SURFACE ELEVATION		DATUM NGVD	
START DATE		11/2007		END DATE		11/2007	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		M. Kress	

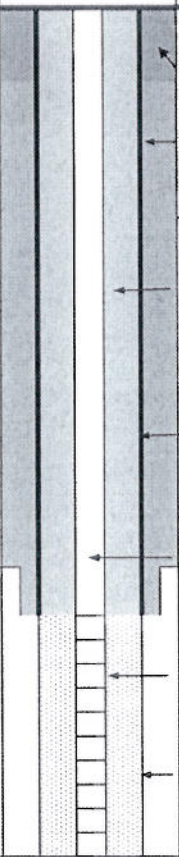
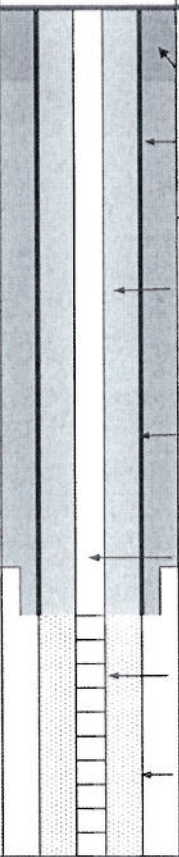
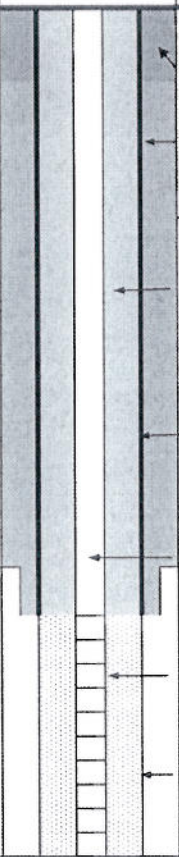
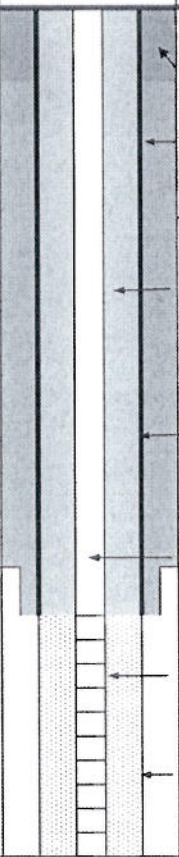
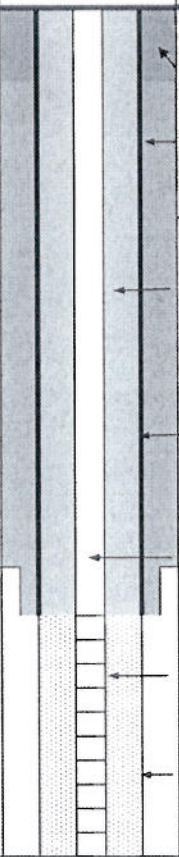
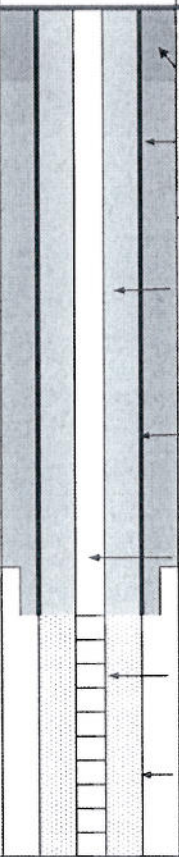
WATER LEVEL DATA						TYPE OF DRILL RIG		CME-550	
DATE	TIME	WATER	CASING	NOTES		CASING SIZE AND DIAMETER		6-5/8" HSA	
						OVERBURDEN SAMPLING METHOD		2" diameter x 24" long splitspoon	
						ROCK DRILLING METHOD		5 7/8 Roller Bit	

D E P T H	SAMPLE					SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M (ppm)
	BLOWS (/6")	NO.	DEPTH (FT)	N-VALUE /RQD %	RECOVERY (%)				
1						No Well Log Generated for the Reinstallation of BR-1.			
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									

S - Split Spoon Sample C - Rock Core Sample		NOTES:	1) HNu PI - 101 organic vapor meter (OVM) used to screen soil samples. Meter was calibrated to the equivalent of 100 ppm isobutylene in air. 2) OVM reading from headspace screening of soil samples.
General Notes:		1) Stratification lines represent approximate boundary between soil types; transitions may be gradual. 2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.	

CONTRACTOR		SJB Services		BORING LOCATION		See Location Plan	
DRILLER		Ken Fuller & Steve		GROUND SURFACE ELEVATION		DATUM NGVD	
START DATE		12/18/2007		END DATE		12/21/2007	
				GZA GEOENVIRONMENTAL REPRESENTATIVE		M. Kress & C. Sava	

WATER LEVEL DATA						TYPE OF DRILL RIG	
DATE	TIME	WATER	CASING	NOTES		CME-550	
12/26/2007	14:00	3.3 ft	@ surface	road box		6-5/8" HSA	
						OVERBURDEN SAMPLING METHOD	
						2" diameter x 24" long splitspoon	
						ROCK DRILLING METHOD	
						5 7/8 Roller Bit-NO Size Rock Core-3 7/8 Roller bit	

DEPTH (ft)	SAMPLE					SAMPLE DESCRIPTION	WELL INSTALLATION DIAGRAM	WELL INSTALLATION DESCRIPTION	O V M
	BLOWS (/6")	NO.	DEPTH (FT)	N-VALUE /ROD %	RECOVERY (%)				
1	21					Light Brown Fine SAND, trace Silt, moist (Native)			ND
2	6								
3	9								
4	9								
5	12		2 - 4	28					
6	13								
7	15								
8	12								
9	2		4 - 6	22					
10	7								
11	15								
12	18								
13	45		6 - 8	77		water encountered in split spoon at 8.0'			ND
14	38								
15	39								
16	34								
17	5		8 - 10	49					
18	18								
19	31								
20	28		10 - 11.5						
21	7								
22	13								
23	50/3								
24									
25						Dark Gray GRAVEL and Boulder fragments 11.0'			ND
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37						Splitspoon Refusal at 11.5 ft bgs Auger refusal at 11.5 feet bgs Rollerbit to 12.5 feet bgs			ND
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49						BEDROCK Lockport Dolomite Formation Gray, hard, very slight to slight weathering, fine grained, horizontal and low angle fractures.			ND
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61						End of boring at 17.5 feet bgs.			ND
62									
63									
64									
65									
66									
67									
68									
69									
70									
71									
72									

S - Split Spoon Sample	NOTES:	1) HNu PI - 101 organic vapor meter (OVM) used to screen soil samples.
C - Rock Core Sample		Meter was calibrated to the equivalent of 100 ppm isobutylene in air.
		2) OVM reading from headspace screening of soil samples.

General Notes:	1) Stratification lines represent approximate boundary between soil types; transitions may be gradual.
	2) Water level readings have been made at times and under conditions stated; fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

SOIL BORING LOG



511 Congress Street, Portland Maine 04101

Project Name: <u>Peter's Dry Cleaners</u>	Boring ID: <u>DP-007</u>
Project Location: <u>LOCUSPORT NY</u>	Page No. <u>1</u>
Project No.: <u>3612/22244</u> Client: <u>NYSDOT</u>	of: <u>1</u>
Boring Location: <u>DP-007</u>	Refusal Depth: <u>14.8'</u> Total Depth: <u>14.8'</u> Bore Hole ID/OD: <u>2 1/4</u>
Weather: <u>Partly Cloudy</u>	Soil Drilled: <u>14.8'</u> Method: <u>Direct Push</u> Casing Size: <u>NA</u>
Subcontractor: <u>Nature's Way cut</u>	P.I.D (eV): <u>0.0 - 42.8, 11m</u> Protection Level: <u>7</u> Sampler: <u>4' Poly Tube</u>
Driller: <u>NOTE</u>	Date Started: <u>10/22/13</u> Date Completed: <u>10/22/13</u> Sampler ID/OD: <u>1 1/4</u>
Rig Type/Model: <u>-</u>	Logged By: <u>C. LYNN</u> Checked By: <u>DSL 2/27/14</u> Hammer Wt/Fall: <u>NA</u>
Reference Elevation: <u>UNK</u>	Water Level: <u>-</u> Time: <u>-</u> Hammer Type: <u>NA</u>

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Tests Performed			
0.0										
1					0.0			<u>Asphalt / Gravel</u> <u>Silty gravel - moist, non-plastic, DRK BROWN</u>	<u>GM-ML</u>	
2		100%						<u>Silt non plastic, moist, 10% gravel, Reddish Brown.</u>	<u>ML</u>	
3										
4								<u>Silt non plastic, 10-20% sand, Dry, Tan, Reddish brown.</u>	<u>ML</u>	
5	<u>DP-007004</u>	100%			0.0			<u>silt Plastic, moist.</u>	<u>MH</u>	
6										
7										
8								<u>SAND - Poorly graded, 10-20% gravel Fine sand, wet, Reddish Brown</u>	<u>SP</u>	
9										
9.2		100%			2.0			<u>SAND Poorly graded, 10% gravel, coarse sand, fine, wet.</u>	<u>SP</u>	
10										
11										
12					1.2			<u>SAND - Poorly graded, 10% gravel, wet, Grayish Brown.</u>	<u>SP</u>	
13		100%			8.0	21.9				
14					22			<u>SAND Poorly graded,</u>	<u>SP</u>	
14.8	<u>SAMPLE DP-007014</u>	100%			13.0			<u>* Refusal @ 14.8'</u> <u>Silt firm, moist, brown, 0.3" thick</u>	<u>ML</u>	

NOTES:
 Installed 1" microwell @ this location; btm of Well. 11.9' (Due to cave in).
 10' screen. Well set in Clean sand w/ 6"-12" Bentonite Seal @ top.

FIGURE 4.4
SOIL BORING LOG

NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG



511 Congress Street, Portland Maine 04101

Project Name: <u>Peter's Dry Cleaners</u>	Boring ID: <u>DP-24</u>
Project Location: <u>LOCALITY, NY</u>	Page No. <u>A</u>
Project No.: <u>3612122294</u> Client: <u>NYSDEC</u>	of: <u>2</u>
Boring Location: <u>DP-24</u>	Refusal Depth: <u>NA</u> Total Depth: <u>18'</u>
Weather: <u>Partly Cloudy</u>	Soil Drilled: <u>18'</u> Method: <u>Direct Push</u>
Subcontractor: <u>Nature's Way Env't</u>	P.I.D (eV): <u>0.0 ppm</u> Protection Level: <u>D</u>
Driller: <u>NOTE</u>	Date Started: <u>10/22/13</u> Date Completed: <u>10/22/13</u>
Rig Type/Model: <u>NA</u>	Logged By: <u>Clyde</u> Checked By: <u>DSL 2/27/14</u>
Reference Elevation: <u>UNK</u>	Water Level: <u>---</u> Time: <u>---</u>
	Hammer Wt/Fall: <u>NA</u>
	Hammer Type: <u>NA</u>

Sample Information							Monitoring		Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID			
0.0											
2									Loam		
1.3'									Gravel		
2		100%			0.1				Silt - Mod-Plastic, Firm, Dry, Reddish Brown	MH	
3											
4									Silt - Non-Plastic, Firm, Dry, Reddish Brown	ML	
5		100%			0.0						
6.1									Silt - Mod-Plastic, Moist, Reddish Brown	MH	
7					0.0						
8									Silt - Mod-Plastic, Wet, Reddish Brown	MH	
9		100%									
10									Silt - Non-Plastic, Firm, Moist, Reddish Brown	ML	
10.6											
11									Silty SAND - Poorly graded, moist, Reddish-brown	SM-ML	"Firm"
11.9'									Silty SAND - Poorly graded, wet, loose, Reddish-brown, 10% gravel	SW-SM	
12		100%			0.0						
13									Silty SAND - Poorly graded, moist, firm, Reddish Brown	SM-ML	
13.9'											
14									Silty SAND - Poorly graded, wet, loose, 10-25% gravel, Reddish brown	SM-ML	
15		100%			0.0						

NOTES:

Set 1" Microwell @ this location; Btm of well 18' 10' SCREEN; Set well in clean sand w/ 2" 12" bentonite seal @ top.

FIGURE 4.4

SOIL BORING LOG

NYSDEC QUALITY ASSURANCE PROGRAM PLAN

SOIL BORING LOG



511 Congress Street, Portland Maine 04101

Project Name: <u>Peter's Day Cleaning</u>	Boring ID: <u>DP-24</u>
Project Location: <u>Locust, NY.</u>	Page No. <u>2</u>
Project No.: <u>3612122244</u> Client: <u>NYSDEC</u>	of: <u>2</u>
Boring Location: <u>DP-24</u>	Refusal Depth: <u>NA</u> Total Depth: <u>18'</u>
Weather: <u>Partly cloudy</u>	Soil Drilled: <u>18'</u> Method: <u>Direct Push</u>
Subcontractor: <u>Nature's Way ENVT</u>	P.I.D (eV): <u>0.0 ppm</u> Protection Level: <u>D</u>
Driller: <u>Nate</u>	Date Started: <u>10/22/13</u> Date Completed: <u>10/22/13</u>
Rig Type/Model: <u>DL</u>	Logged By: <u>C. Lyman</u> Checked By: <u>DSL 2/27/14</u>
Reference Elevation: <u>UNK</u>	Water Level: <u>DL</u> Time: <u>---</u>
	Hammer Wt/Fall: <u>NA</u> Hammer Type: <u>NA</u>

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Tests Performed			
0.0										
15.5								<u>SEE PREVIOUS PAGE!</u>		
16								<u>Silt: trace fine sand, fine, non-plastic, moist, reddish-brown</u>	<u>ML</u>	
16.8								<u>SAND - wet, loose, reddish-brown</u>	<u>SP</u>	
17								<u>GRAVEL - wet, loose, reddish-brown</u>	<u>GM-ML</u>	
17.2								<u>Silty SAND - wet, loose non-plastic, reddish brown</u>	<u>SM-ML</u>	
18								<u>Note</u> Drilled Boring @ 18' did not get Refusal! <u>DL</u>		

NOTES:

SOIL BORING LOG



511 Congress Street, Portland Maine 04101

Project Name: <u>Peter's Dry Cleaning</u>	Boring ID: <u>DP-25</u>
Project Location: <u>Lockport, NY</u>	Page No. <u>1</u>
Project No.: <u>3612122244</u> Client: <u>WYSDEC</u>	of: <u>1</u>
Boring Location: <u>DP-25</u>	Refusal Depth: <u>16'</u> Total Depth: <u>16'</u>
Weather: <u>Partly Cloudy</u>	Soil Drilled: <u>16'</u> Method: <u>Direct Push</u>
Subcontractor: <u>Nature's Way Env't.</u>	P.I.D (eV): <u>0.200m</u> Protection Level: <u>D</u>
Driller: <u>Not</u>	Date Started: <u>10/22/13</u> Date Completed: <u>10/22/13</u>
Rig Type/Model:	Logged By: <u>CLYMER</u> Checked By: <u>DSL 2/27/14</u>
Reference Elevation:	Water Level: <u>—</u> Time: <u>—</u>
	Hammer Wt/Fall: <u>NA</u>
	Hammer Type: <u>—</u>

Sample Information					Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/Recovery (feet)	SPT Blows/6"	N Value	PID Field Scan	PID Headspace	Lab Tests Performed			
0.0										
1		100%	NA	NA	0.0	NA	NA	Loam	I	
1.6								Silt - Non-Plastic, firm, moist, Reddish-Brown.	ML	
2										
3										
4								Silt nonplastic, firm, moist, Reddish-Brown	ML	
5		100%			0.0					
6								Silty Gravel - Nonplastic, firm, Dry Reddish Brown	GM-ML	
6.8										
7								Gravel, silty	GM-ML	
7.8								Gravel, silty Nonplastic, firm, moist	GM-ML	
8								Gravel - trace sands, wet, loose, Reddish-Brown.	GM-ML	
8.2		100%			0.0					
9								Silt - Plastic, moist, firm, Reddish Brown	MH	
9.5								SAND - Poorly graded, Reddish Brown	SP	
10		100%			0.0					
11								Gravel - Poorly graded, trace sands, loose, wet (Reddish brown)	GP-GM	
12										
12.5		100%						SAND Poorly graded, moist, firm, grayish brown. (trace gravel) $\approx 10\%$	SP	
13										
14								SAND Poorly graded, moist, firm, Reddish Brown, (trace gravel) $\approx 20-15\%$	SP	
15		100%			0.0			SAND Poorly graded, moist, firm, Reddish Brown (trace gravel $\approx 10\%$)	SP	

NOTES:

Set 1" Micro well at this boring location; 15' depth of well (due to casing). 10' screen. Set well in clean sand at 11' w/ 6"-12" Bentonite seal @ top.

FIGURE 4.4
SOIL BORING LOG

NYSDEC QUALITY ASSURANCE PROGRAM PLAN

16								Silt nonplastic, firm, moist, Reddish Brown	ML	
----	--	--	--	--	--	--	--	---	----	--

SOIL BORING LOG



511 Congress Street, Portland Maine 04101

Project Name:	NYSDEC PETER'S DRY CLEANING		Boring ID:	MW-101	
Project Location:	LOCKPORT, NY		Page No.	1	
Project No.:	3612122244	Client:	USACE NYSDEC	of: 2	
Boring Location:	MW-101	Refusal Depth:	21.3'	Total Depth:	21.3'
Weather:	Overcast, 62°	Soil Drilled:	21.3'	Method:	Auger/Split Spoon
Subcontractor:	GEOLOGIC NY, INC	Protection Level:	D	Casing Size:	NA
Driller:	DAVE LYONS	Date Started:	7/29/14	Date Completed:	7/29/14
Rig Type/Model:	TRUCK MTD AUGER	Logged By:	RSJ	Checked By:	TDL
Reference Elevation:	NA/Ground	Water Level:	7.8	Time:	0952

Sample Information			Monitoring				Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	NA Blow Counts						
0.0									
1.0	1.3						0-1.5 - GRAY GRAVEL, FILL	GP	0.0 ppm
2.0				15	16	14	10	1.5-2 - Red Brown med-fine SAND + SILT, DRY. TRACE CLAY	SM
3.0	1.6						2-4 - RED BROWN SILT, SOME FINE SAND, SOME CLAY. Med STIFF, DRY.	SM	4.7 ppm
4.0				5	6	6	8		0.0 ppm
5.0	1.7						4-6 - Red Brown SILT, FIRM. 4-5 moist. GRAVEL @ 5.2'	SM	0.0 ppm
6.0				5	11	12	17	5-6' DRY	↓
7.0	2.0						6-7 - SGA	SM	0.0 ppm
8.0				18	24	22	30	7-7.5 - Red Brown FINE SAND, TRACE SILT WET	SPM
							7.5-8 - Red Brown SAND + GRAVEL.	GM	↓
9.0	1.8						8-10 - Red Brown COARSE SAND + GRAVEL WET	GM	0.0 ppm
10.0				10	22	27	34	↓	
11.0	2.0						10-12 - Red Brown FINE SAND, SOME GRAVEL	SW	0.0 ppm
12.0				8	19	22	32	↓	
13.0	1.5						12-13.8 - Red Brown FINE SAND + SILT, Rock in situ @ 13.8' - REFUSAL.	SM	0.0 ppm
14.0				14	26	32	50/3	↓	
15.0	1.5						14-15 - Red Brown COARSE SAND + GRAVEL, WET.	GM	0.0 ppm
16.0				14	51	44	47	15-15.3 - ROCK FRAGMENTS.	↓
							15.3-16 - Red Brown SAND + GRAVEL FILL	GM	↓

NOTES:

SOIL BORING LOG

SOIL BORING LOG



511 Congress Street, Portland Maine 04101

Project Name: <u>PETER'S DRY CLEANING</u>	Boring ID: <u>MW-101</u>
Project Location: <u>LOCKPORT, NY</u>	Page No. <u>2</u>
Project No.: <u>3612122244.04</u> Client: <u>USACE NYS DEC</u>	of: <u>2</u>
Boring Location: <u>MW-101</u>	Refusal Depth: <u>21.3'</u> Total Depth: <u>21.3'</u>
Weather: <u>PARTLY CLOUDY, 70°</u>	Soil Drilled: <u>21.3'</u> Method: <u>Auger/SPLIT SP</u>
Subcontractor: <u>GEOLOGIC NY, INC</u>	Protection Level: <u>D</u>
Driller: <u>DAVE LYONS</u>	Date Started: <u>7/29/14</u> Date Completed: <u>7/29/14</u>
Rig Type/Model: <u>TRUCK MTD. AUGER</u>	Logged By: <u>RST</u> Checked By: <u>TDL</u>
Reference Elevation: <u>NA/GROUND</u>	Water Level: <u>7.8</u> Time: <u>0952</u>

Sample Information			Monitoring			Sample Description and Classification	USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	NA					
16.0			BLOW COUNTS					
16.0								
17.4	0.8		55	54	10, 3	16-16.8' - Red Brown Till	Gm	0.0ppm ↓
18.0								
19.0	0.9	6	12	17	18	Refusal @ 16.8' bgs 18-20' - Red Brown Fine Sand + Silt, Saturated, Firm	Sm	0.0ppm ↓
20.0	1.1	16	30	54	3	20-21.3' - Red Brown Silt + Fine Sand, Trace Clay. Saturated. Firm Rock in shoe. Refusal, End of Boring @ 21.3' bgs	Sm	
						</		

NOTES:

SOIL BORING LOG

SOIL BORING LOG



511 Congress Street, Portland Maine 04101

Project Name: NYSDEC PETER'S DRY CLEANING
 Project Location: LOCKPORT, NY
 Project No.: 3612122244 Client: USACE NYSDEC

Boring ID: MW-2B
 Page No. 1
 of: 1

MW-2B

Boring Location: MW-102B MW-2B Refusal Depth: 14.3' Total Depth: 14.3' Bore Hole ID/OD: 6-10
 Weather: 68° Rain Soil Drilled: 14.3' Method: Hollow Stem Casing Size: 4
 Subcontractor: GEOLOGIC, NY, INC. Protection Level: D Sampler: SPLIT SPOON
 Driller: DAVE LYONS Date Started: 7/28/14 Date Completed: 7/28/14 Sampler ID/OD: 2
 Rig Type/Model: HOLLOW STEM AUG. Logged By: RST Checked By: TDL
 Reference Elevation: NA/GROUND Water Level: Time:

Sample Information		Monitoring		Sample Description and Classification		USCS Group Symbol	Remarks
Depth (feet bgs)	Sample Number	Penetration/Recovery (feet)	NA				
0.0			Blow counts				
1.0		1.5'	8 11 8 7	0-1' Brown med-fine SAND + GRAVEL DRY		GP	PID = 0.0
2.0				1-2' Dark Brown fine SAND, some SILT, DRY			
3.0		1.5'	4 3 5 9	2-3' Dark Brown CLAY, trace SILT, DRY, SOFT		CL	PID = 0.0
4.0				3-4' Brown/Red Brown SILT, trace SAND, DRY, Med STIFF		ML	PID = 7.6 @ 4'
5.0		1.9'	5 9 12 14	4-6' Red/Brown SILT, VERY STIFF, DRY - some small, fractured gravel @ 5.5'		ML	4-5.5' = 0.08 ppm 5.5-6' = 1.4 ppm
6.0				6-7' SAA, med STIFF, moist. Gravel, strong det odor @ 6.5'		ML	PID @ 6.5' = 48.6 ppm
7.0			16 19 22 30	7-8' Brown fine SAND, moist, no odor. PID = 0.0		SW	
8.0				8-8.25' - Brown fine-med SAND, moist		SW	PID = 1.5 ↓
9.0			13 21 25 50/0.25	8.25-9.75' - Red/Brown SILT, DRY, hard		ML	
10.0							
11.0				Refusal @ 9.75'			
12.0				RESET SPOON. NO RECOVERY 10-14'			
13.0				POSSIBLE TILL / FRACTURED BEDROCK.			
14.0			50/3	14-14.3' - BROWN SAND + GRAVEL TILL		GM	

NOTES:

E.O.B. @ 14.3'

SOIL BORING LOG

NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ROCK CORING LOG



511 Congress Street, Portland Maine 04101

Project Name: <u>PETER'S DRY CLEANING</u>	Boring ID: <u>MW-100B</u>
Project Location: <u>LOCKPORT, N.Y.</u>	Page No. <u>1</u>
Project No.: <u>3612122244</u>	Client: <u>NYSDEC</u>
Refusal Depth: <u>NA</u>	Total Depth: <u>19.5'</u>
Soil Drilled: <u>NA</u>	Method: <u>Rock Core</u>
P.I.D (eV): <u>MAX=6.0/11m/10.6'</u>	Protection Level: <u>D</u>
Date Started: <u>7/31/14</u>	Date Completed: <u>7/31/14</u>
Logged By: <u>RST</u>	Checked By: <u>TDL</u>
Water Level: <u>NA</u>	Time: <u>NA</u>
Reference Elevation: <u>NA</u>	Core Interval: <u>11.5'-19.5'</u>

Depth (feet bgs)	Sample Number	Penetration/Recovery (feet)	Natural Core Breaks		Weathered Condition	Rock Quality			Drill Rate (min/ft)	Color	Rock Description and Comments on Drilling	Graphic Log	Additional Remarks
			Type/Dip	Surface Condition		Total 4" Core	RQD (%)	Rock Quality Description					
11.5		3.1/3.1									Overburden consists of crusher run backfill to top of rock		
12.5													
13.5													
14.5													
15.5		4.9/4.9									14.6-19.5' GRAY HARD, SOUND, HARD BEDDED DOLOMITE. NATURAL HORIZONTAL FRACTURES @ 15.3', 15.8', 16.6', 17.8', 18.6', 19.1' bgs.		
16.5													
17.5													
18.5													
19.5													

NOTES:

E.O.B. @ 19.5' bgs

FIGURE 4.5
ROCK CORING LOG

NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ROCK CORING LOG



MACTEC

511 Congress Street, Portland Maine 04101

Project Name: PETER'S DRY CLEANING Boring ID: MW-101B
 Project Location: LOCKPORT, NY Page No. 1
 Project No.: 3612122244 Client: NYSDEC of: 1
 Boring Location: MW-101B Refusal Depth: NA Total Depth: 29.3' Bore Hole ID/OD: 6/9
 Weather: PARTLY CLOUDY, 62° Soil Drilled: NR Method: Rock Core Casing Size: 4
 Subcontractor: GEORGE NY, INC P.I.D (eV): 10.6 eV Protection Level: D Bit Type: NA
 Driller: DAVE LYONS Date Started: 7/31/14 Date Completed: 7/31/14 Bit Size: 3
 Rig Type/Model: TIMBER MTD AUGER Logged By: RST Checked By: TOL Bit Use: NA
 Reference Elevation: NA Water Level: NA Time: NA Core Interval: 26.3-29.3

Depth (feet bgs)	Sample Number	Penetration/ Recovery (feet)	Natural Core Breaks		Weathered Condition	Rock Quality			Drill Rate (min/ft)	Color	Rock Description and Comments on Drilling	Graphic Log	Additional Remarks
			Type/Dip	Surface Condition		Total 4" Core	RQD (%)	Rock Quality Description					
21.3													
22.3		4.7	Hor			5' 94	EXIA		4' 15"	GR	21.3' - 26.3' - GRAY, SOUND, (HARD) BEDDED TO THICK BEDDED DOLOMITE. NATURAL HORIZONTAL BREAKS @ 23.2', 24.7'		5.1 ppm in break @ 23.2'
23.3													4.7 ppm in break @ 24.7'
24.3													
25.3													
26.3													
27.3		3'	Hor			3'	67	FMR	3' 30"	GR	26.3 - 28.4 - GRAY, SOUND (HARD) Bedded to THICK BEDDED DOLOMITE. NATURAL BREAKS		9.6 ppm in break @ 26.8'
28.3									4' 15"		28.5 - 29.1 - DARK GRAY THIN BEDDED SHALE LAYER		4.3 ppm in break @ 27.6'
29.3									4' 45"		29.1 - 29.3 - GRAY, SOUND (HARD) Bedded to THICK BEDDED DOLOMITE. NATURAL BREAKS.		6.1 ppm in break @ 29'

NOTES:

E.O.B. @ 29.3' bgs

FIGURE 4.5
ROCK CORING LOG

NYSDEC QUALITY ASSURANCE PROGRAM PLAN

WELL/PIEZOMETER CONSTRUCTION DIAGRAM FLUSHMOUNT

LOCATION ID:

DP-007

Project Name: Robert's Dry Cleaning
 Project Location: Lockport, NY
 Project Number: 3612122244 Task Number: 02
 Subcontractor: Nature's Way Env't Drilling Method: Direct Push
 Development Method: Purged Development Date: —
 Bucking Posts/Ballards: NO

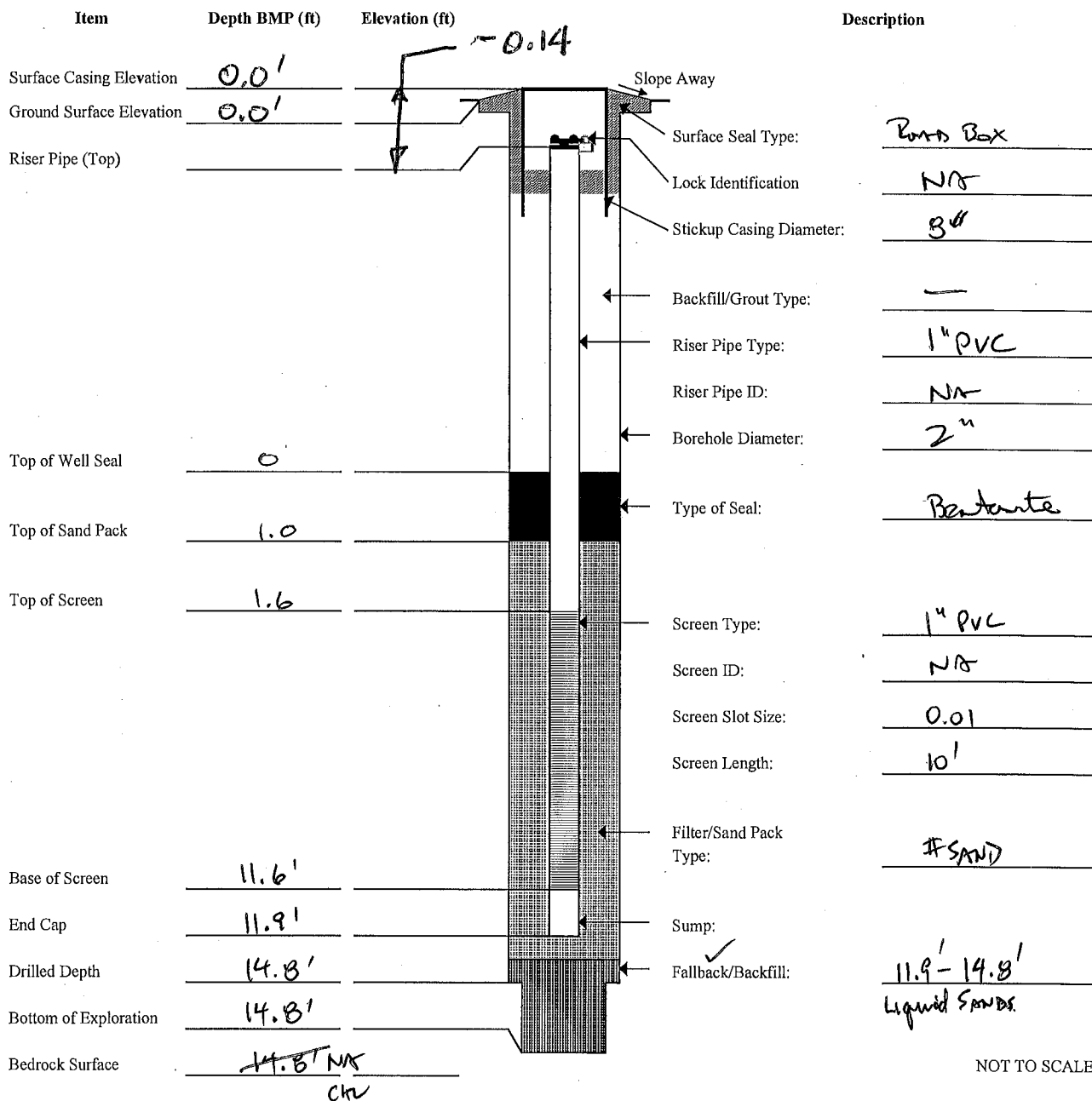
Date Started: 10/24/13 Date Completed: 10/25/13
 Logged By: Chyn
 Checked By: Ben Checked Date: 11/01/14

Notes:

Measuring Point Information

Measuring Point (MP) Type: Top Of Riser

MP Elevation (ft):



NOT TO SCALE

WELL/PIEZOMETER CONSTRUCTION DIAGRAM FLUSHMOUNT

LOCATION ID:

DP-24

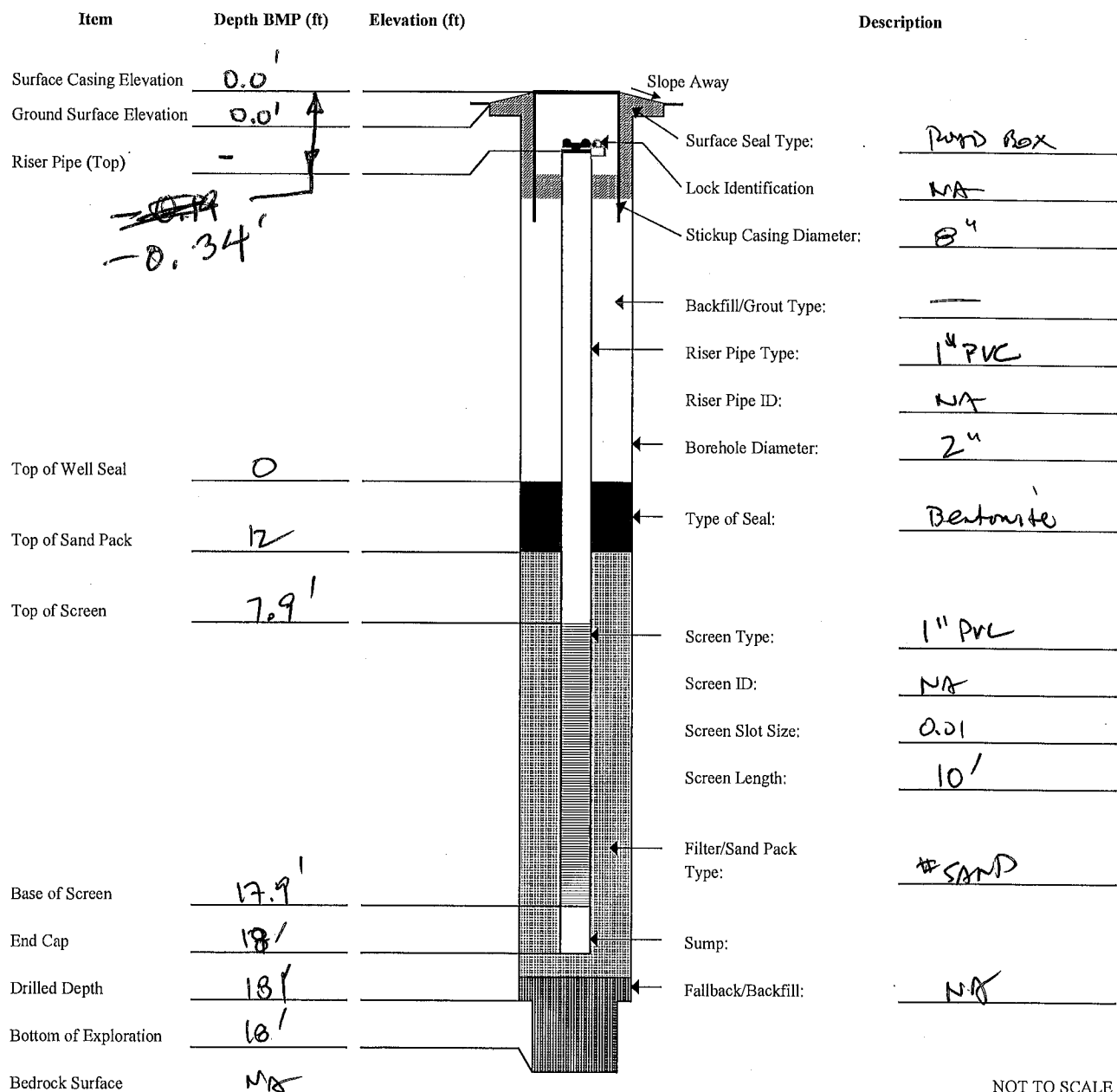
Project Name: Peter's Dry Cleaning
 Project Location: Lockport, NY
 Project Number: 3612122244 Task Number: 02
 Subcontractor: Nature's Way Drilling Method: DP
 Development Method: Purged Development Date: —
 Bucking Posts/Ballards: NO

Date Started: 10/22/13 Date Completed: 10/25/13
 Logged By: Chn
 Checked By: AS Checked Date: 11/10/14

Notes:

Measuring Point Information

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



NOT TO SCALE

WELL/PIEZOMETER CONSTRUCTION DIAGRAM FLUSHMOUNT

LOCATION ID:

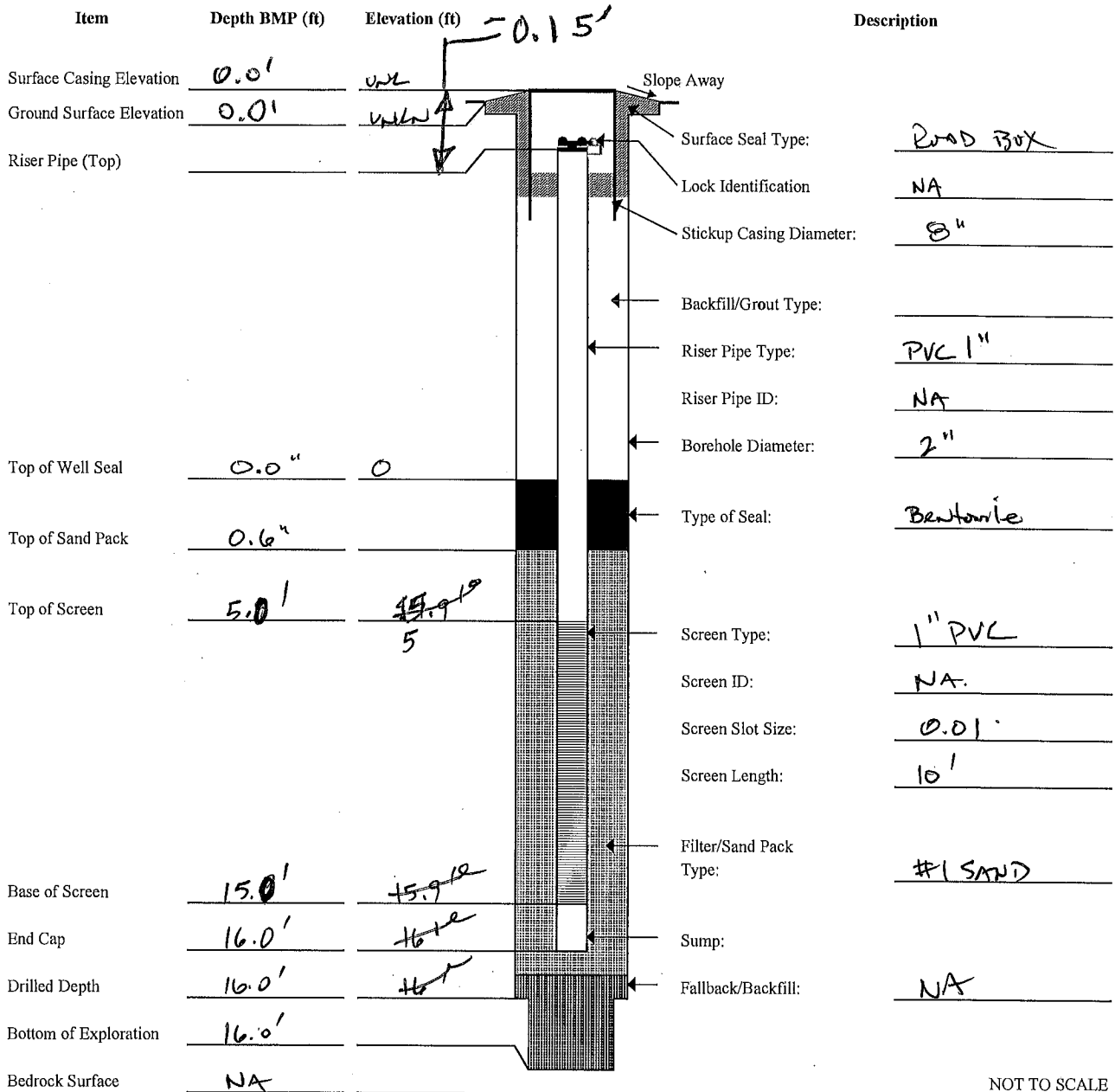
DP-25²

Project Name: Peters Dry Cleaning
 Project Location: LOCKPORT, NY
 Project Number: 3612122244 Task Number: 02
 Subcontractor: Nature's Way Env Drilling Method: Direct Push
 Development Method: Purged Development Date: 10/24/13
 Bucking Posts/Ballards: NO

Date Started: 10/22/13 Date Completed: 10/25/13
 Logged By: CLYMER
 Checked By: ADAM Checked Date: 11/10/14

Measuring Point Information

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



NOT TO SCALE

WELL/PIEZOMETER CONSTRUCTION DIAGRAM FLUSHMOUNT

LOCATION ID:

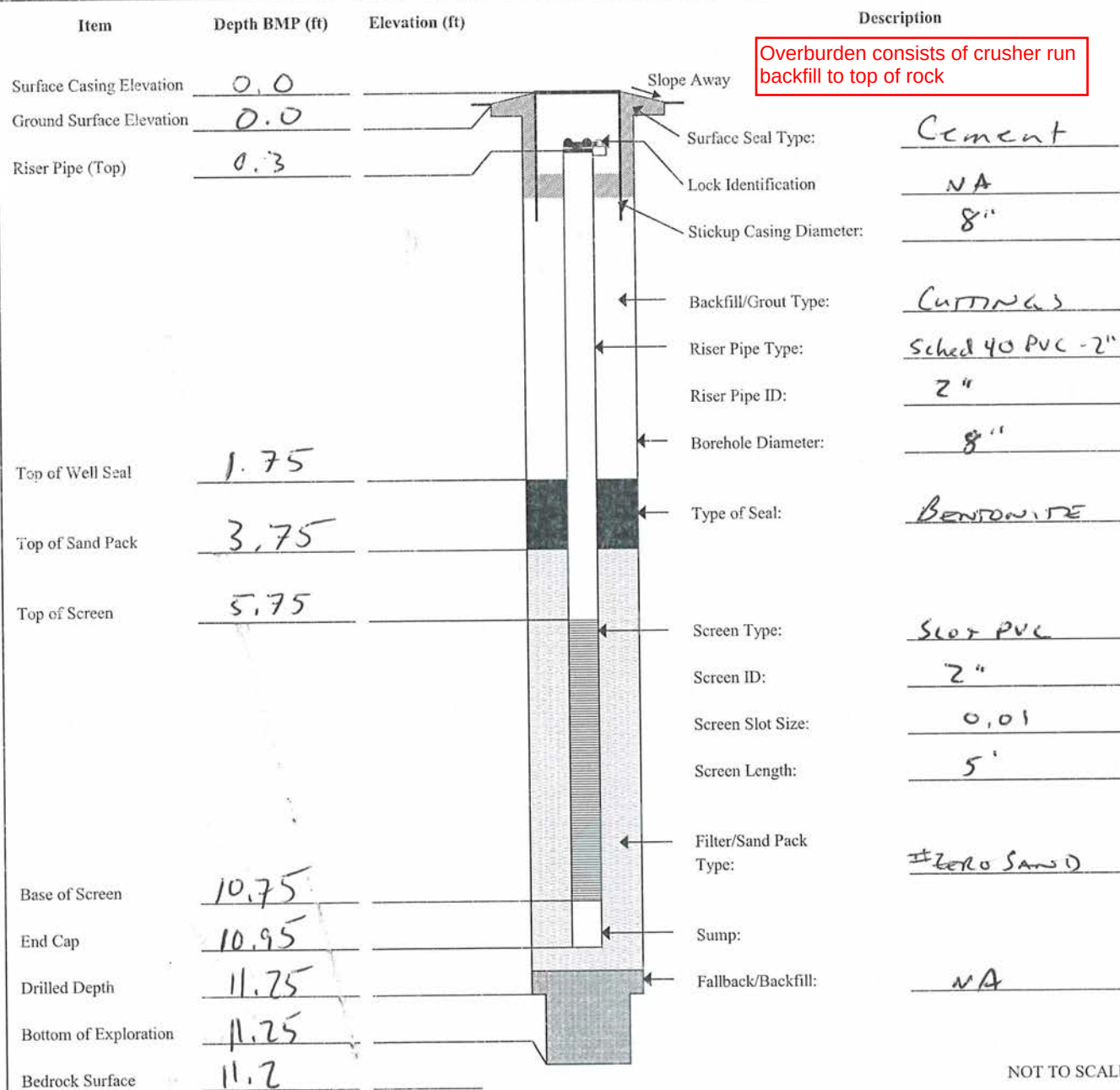
MW-100

Project Name: NYSDEC Peter's Day CLEANING
 Project Location: LOCKPORT, NY
 Project Number: 3612122244 Task Number: 04
 Subcontractor: GeoLogic, NY Drilling Method: Auger
 Development Method: WHALE PLANT Development Date: 8/1/14
 Bucking Posts/Ballards: N/A
 Notes: _____

Date Started: 7/29/14 Date Completed: 7/30/14
 Logged By: Ryan Torrey
 Checked By: TDL Checked Date: 10/13/14

Measuring Point Information

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



NOT TO SCALE

WELL/PIEZOMETER CONSTRUCTION DIAGRAM FLUSHMOUNT

LOCATION ID:

MW-100B

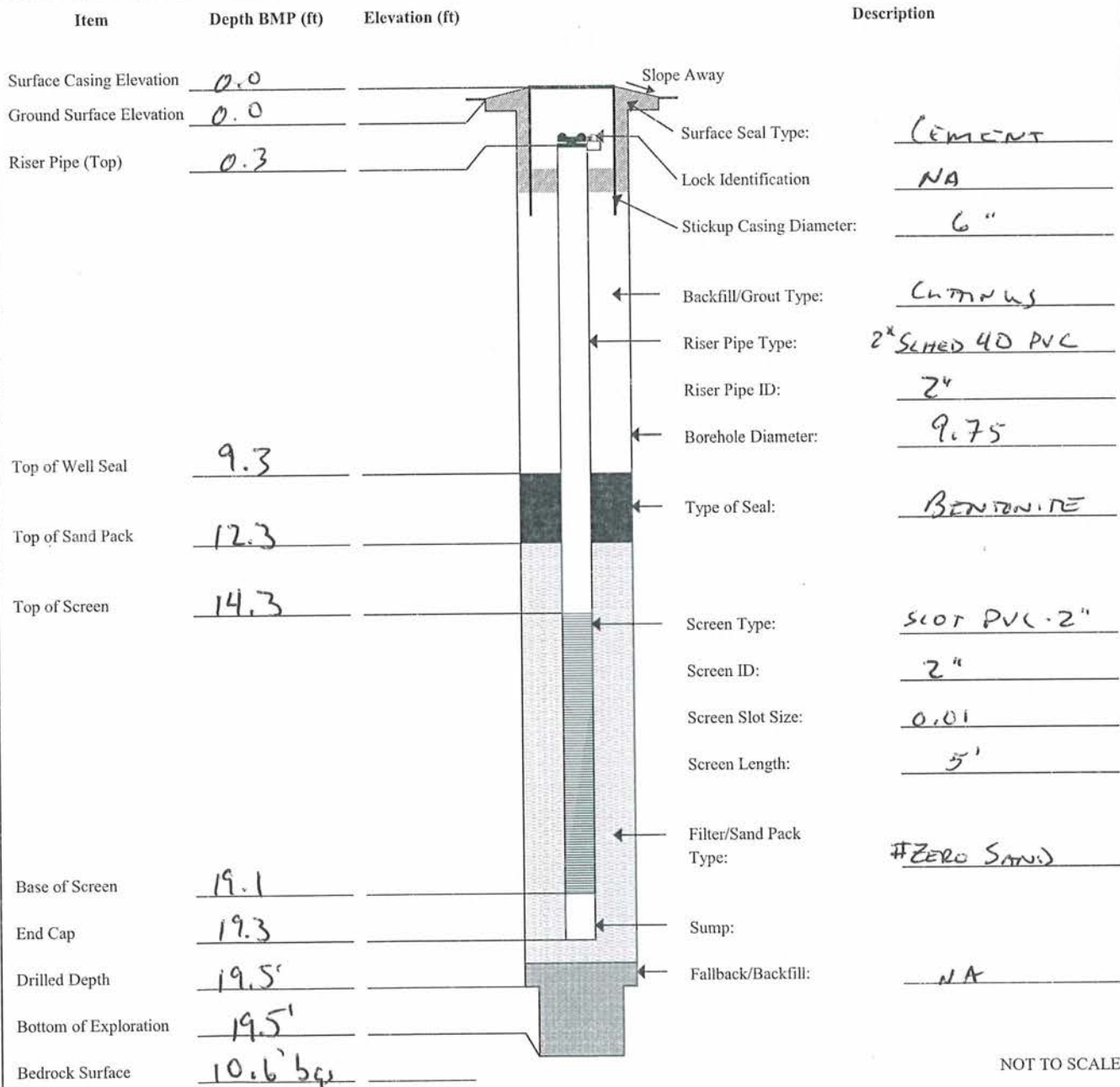
Project Name: NYSDCL PETER'S DRY CLEANING
 Project Location: LOCKPORT, NY
 Project Number: 3612122241 Task Number: 04
 Subcontractor: GEOLOGIC NY, INC Drilling Method: Auger
 Development Method: Water Pump/Batter Development Date: 8/1/14
 Bucking Posts/Ballards: N/A

Date Started: 7/31/14 Date Completed: 7/31/14
 Logged By: R. TERRY
 Checked By: TDL Checked Date: 10/13/14

Notes:

Measuring Point Information

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



NOT TO SCALE

WELL/PIEZOMETER CONSTRUCTION DIAGRAM FLUSHMOUNT

LOCATION ID:

MW-101

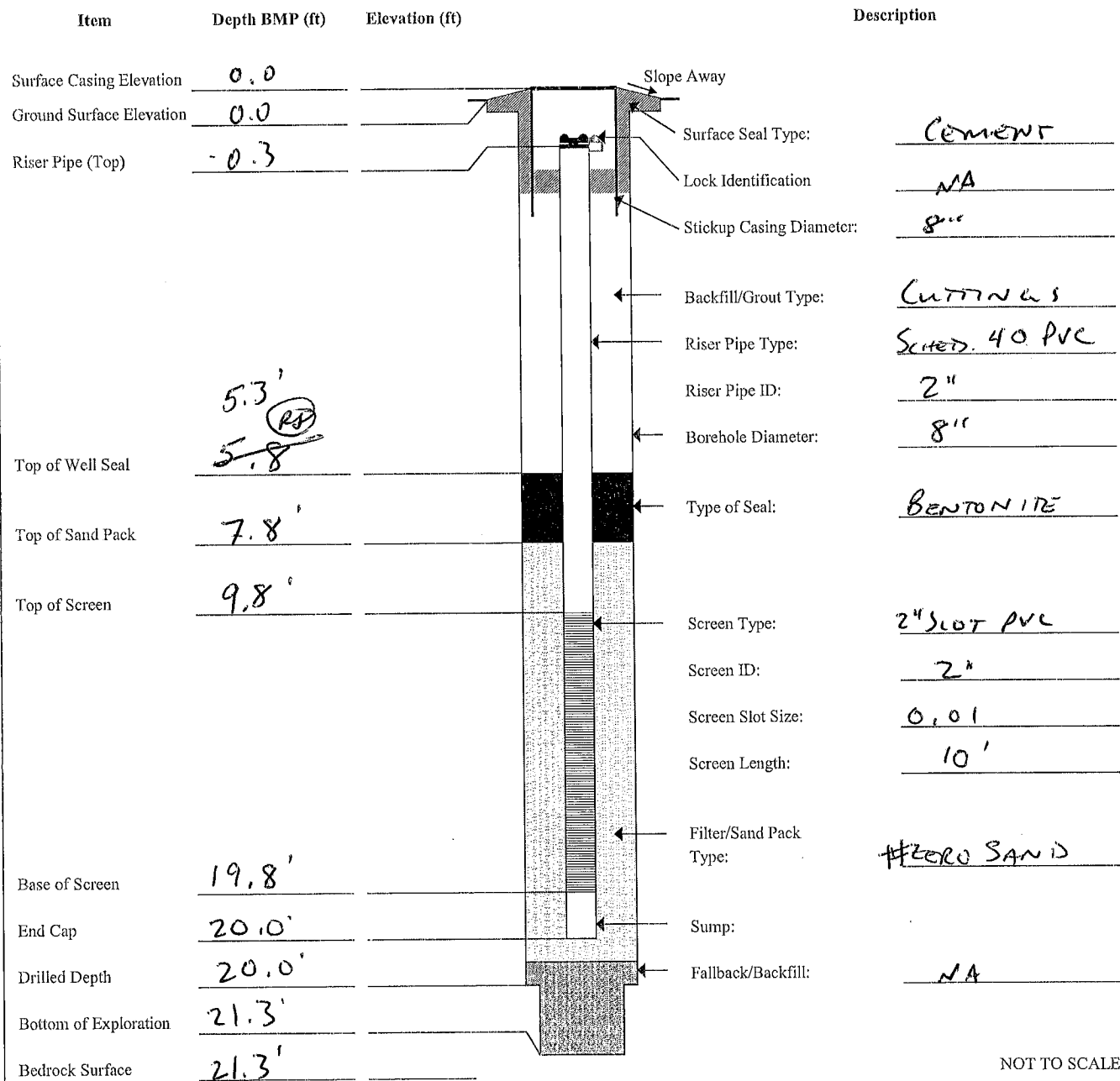
Project Name: NYSDC PETER'S DRY CLEANING
 Project Location: LOCKPORT, NY
 Project Number: 361222440 Task Number: 04
 Subcontractor: GEOLOGIC NY, INC Drilling Method: Auger
 Development Method: WATER PUMP Development Date: 8/1/14
 Bucking Posts/Ballards: N/A

Date Started: 7/29/14 Date Completed: 7/29/14
 Logged By: Ryan Jorrey
 Checked By: TOL Checked Date: 10/13/14

Notes:

Measuring Point Information

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



NOT TO SCALE

WELL/PIEZOMETER CONSTRUCTION DIAGRAM FLUSHMOUNT

LOCATION ID:

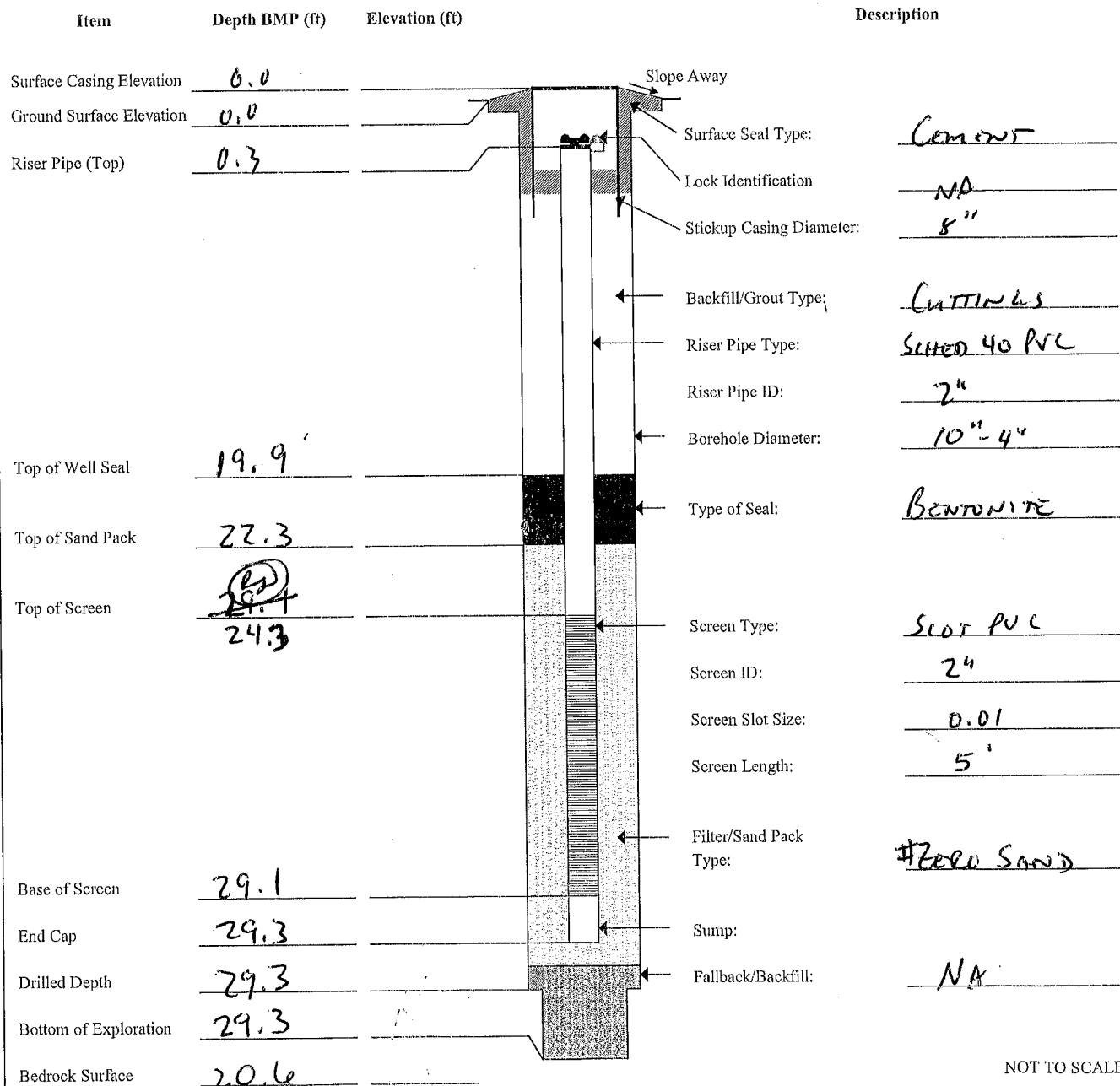
MW-101B

Project Name: NYSDEC PETER'S DAY CLEANING
 Project Location: LOCKPORT, NY
 Project Number: 3612122244 Task Number: 04
 Subcontractor: GEOLOGIC NY, INC Drilling Method: AUGER
 Development Method: WHALE PUMP Development Date: 8/1/14
 Bucking Posts/Ballards: N/A
 Notes: _____

Date Started: 7/30/14 Date Completed: 7/31/14
 Logged By: R. JOHNSON
 Checked By: TDL Checked Date: 10/13/14

Measuring Point Information

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



NOT TO SCALE

WELL/PIEZOMETER CONSTRUCTION DIAGRAM FLUSHMOUNT

LOCATION ID: MW-23
AW-1023 ②

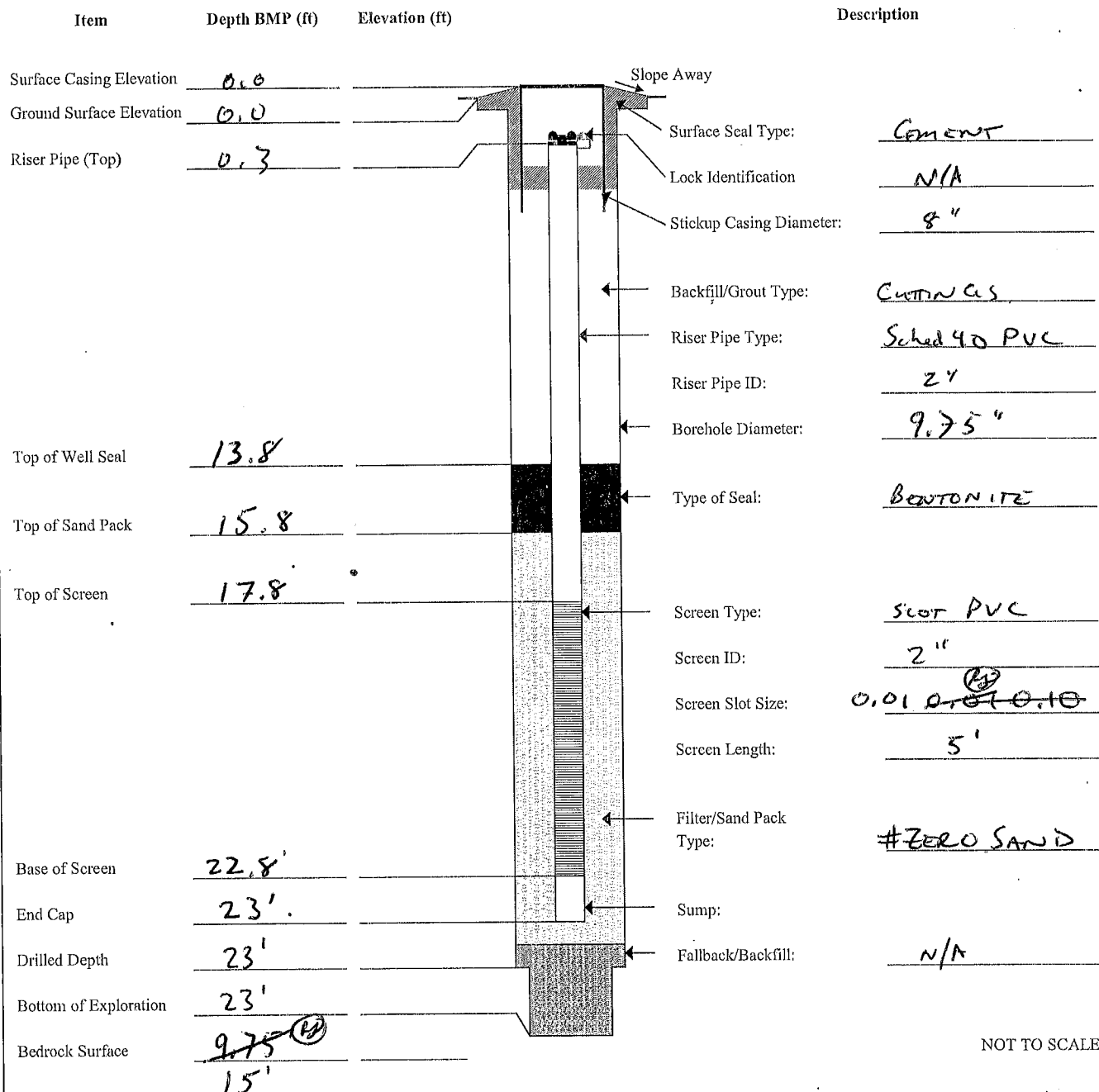
Project Name: PETER'S DRY CLEANING
Project Location: LOCKPORT, NY
Project Number: 3612122244 Task Number: 04
Subcontractor: GEOLOGIC NY, INC. Drilling Method: AUGER/LORE
Development Method: WITHE RUM Development Date: 8/1/14
Bucking Posts/Ballards: N/A

Date Started: 7/28/14 Date Completed: 7/28/14
Logged By: RSJ
Checked By: TDL Checked Date: 10/13/14

Notes: _____

Measuring Point Information

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



NOT TO SCALE

APPENDIX E

Excavation Work Plan

APPENDIX E – EXCAVATION WORK PLAN (EWP)

There is still groundwater and soil vapor contamination remaining at the Peters Dry Cleaning Site (see Figure 2.4), as well as soil contamination above unrestricted use SCO. Any excavation occurring on-site will need to be conducted in accordance with this EWP.

E-1 Notification

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the NYSDEC contacts listed in the table below. Table E-1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B of the SMP.

Table E-1: Notifications*

Jasmine Stefansky, NYSDEC DER Project Manager	(518) 402-9575 jasmine.stefansky@dec.ny.gov
Jeffrey Dyber, Remedial Bureau E Section Chief	(518) 402-9621 jeffrey.dyber@dec.ny.gov
Daniel Tucholski, NYSDOH Project Manager	(518) 486-7016 daniel.tucholski@health.ny.gov
Kelly Lewandowski, NYSDEC Site Control	518-402-9569, kelly.lewandowski@dec.ny.gov

* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed, estimated volumes of soil to be excavated, any modifications of truck routes, and any work that may impact an engineering control;
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern,

potential presence of grossly contaminated media, and plans for any pre-construction sampling;

- A schedule for the work, detailing the start and completion of all intrusive work, and submittals (e.g., reports) to the NYSDEC documenting the completed intrusive work;
- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP, 29 CFR 1910.120 and 29 CFR 1926 Subpart P;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix H of this SMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with the required request to import form and all supporting documentation including, but not limited to, chemical testing results.

The NYSDEC project manager will review the notification and may impose additional requirements for the excavation that are not listed in this EWP. The alteration, restoration and modification of engineering controls must conform with Article 145 Section 7209 of the Education Law regarding the application professional seals and alterations.

E-2 Soil Screening Methods

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed during all excavations into known or potentially contaminated material (remaining contamination). A qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will perform the screening. Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site. Further discussion of off-site disposal of materials and on-site reuse is provided in Sections E-6 and E-7 of this Appendix.

E-3 SOIL STAGING Methods

If soil stockpiling is required, stockpile locations will be identified in the Site-specific work plan. Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and available for inspection by the NYSDEC.

E-4 Materials Excavation and Load-Out

During excavation, the remedial party should make efforts to minimize the environmental footprint. Diesel fuel consumption by heavy construction machinery and equipment can be conserved by:

- Selecting suitably sized and typed equipment for tasks;
- Instructing workers to avoid engine idle and using machinery with automatic idle-shutdown devices;
- Employing auxiliary power units to power cab heating and air conditioning when a machine is unengaged;
- Performing routine, on-time maintenance such as oil changes to improve fuel efficiency; and
- Repowering an engine or replacing it with a newer, more efficient model.

Greenhouse gas (GHG) and particulate matter (PM) emissions from mobile sources can be reduced through use of:

- Equipment retrofits involving low-maintenance multi-stage filters for cleaner engine exhaust;
- Cleaner fuel such as ultra-low sulfur diesel, wherever available (and as required by engines with PM traps); and
- Biodiesel, particularly if made from recycled byproducts.

A qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site. A site utility stakeout will be completed for all utilities prior to any ground intrusive activities at the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements). Trucks transporting contaminated soil must have either tight-fitting opaque covers that are secured on the sides and/or back, or opaque covers that are locked on all sides.

A truck wash will be operated on-site, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete. Truck wash waters will be collected and disposed of off-site in an appropriate manner, or treated on-site, if applicable.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials. Material accumulated from the street cleaning and egress cleaning activities will be disposed off-site at a permitted landfill facility in accordance with all applicable local, State, and Federal regulations.

E-5 Materials Transport Off-Site

Fuel consumed during transfer of excavated soil or other materials to landfills should be reduced by:

- Selecting the closest waste receiver;
- Investigating alternate shipping methods such as rail lines; and
- Identifying opportunities for resource sharing with other waste haulers

The remedial party should make efforts to minimize the environmental footprint during transport. Greenhouse gas (GHG) and particulate matter (PM) emissions from mobile sources can be reduced through use of:

- Equipment retrofits involving low-maintenance multi-stage filters for cleaner engine exhaust;
- Cleaner fuel such as ultra-low sulfur diesel, wherever available (and as required by engines with PM traps);
- Restrict idling of trucks waiting to be loaded; and
- Biodiesel, particularly if made from recycled byproducts.

The remedial party can also use railroad service to transport waste, which often uses less energy than trucking.

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with either tight-fitting opaque covers that are secured on the sides and/or back, or opaque covers that are locked on all sides. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes will be defined in the individual site work plans. All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

E-6 Materials Disposal Off-Site

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed off-site in a permitted facility in accordance with all local, State and Federal regulations. If disposal of material from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC project manager. Unregulated off-site management of materials from this site will not occur without formal NYSDEC project manager approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, (e.g. hazardous waste disposal facility, solid waste landfill, , C&D debris recovery facility). Actual disposal quantities and associated documentation will be reported to the NYSDEC

in the Periodic Review Report. This documentation will include, but will not be limited to: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled consistent with 6 NYCRR Parts 360, 361, 362, 363, 364 and 365. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State C&D debris recovery facility (6 NYCRR Subpart 361-5 registered or permitted facility).

E-7 Materials Reuse On-Site

The qualified environmental professional, as defined in 6 NYCRR Part 375, will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material (i.e. contaminated) does not remain on-site.

Previous sampling results indicated remaining soil on-site meets the residential use SCOs; however, proposed materials for reuse on-site must be sampled for full suite analytical parameters including per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane. The sampling frequency will be in accordance with DER-10 Table 5.4(e)10 unless prior approval is obtained from the NYSDEC project manager for modification of the sampling frequency. The analytical results of soil/fill material testing must meet the site residential use criteria presented in 375-6.8(b) – Residential Use Soil Cleanup Objectives (6 NYCRR 375-6.8). , and the NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances April 2023 (or date of current version, whichever is later) guidance values. Approvals for modifications to the analytical parameters must be obtained from the NYSDEC project manager prior to the sampling event.

Soil/fill material for reuse on-site will be segregated and staged as described in Sections E-2 and E-3 of this EWP. The anticipated size and location of stockpiles will be provided in the 15-day notification to the NYSDEC project manager. Stockpile locations will be based on the location of site excavation activities and proximity to nearby site features. Material reuse on-site will comply with requirements of NYSDEC DER-10 Section 5.4(e)4. Any modifications to the requirements of DER-10 Section 5.4(e)4 must be approved by the NYSDEC project manager.

Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site may only be reused on-site with written approval from the NYSDEC project manager.

E-8 Fluids Management

All liquids to be removed from the site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed off-site at a permitted facility in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be

recharged back to the land surface or subsurface of the site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

E-9 Backfill from Off-Site Sources

All materials proposed for import onto the site will be approved by the qualified environmental professional, as defined in 6 NYCRR Part 375, and will be in compliance with provisions in this SMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at <http://www.dec.ny.gov/regulations/67386.html>, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review. A copy of the form is presented as part of this Appendix E.

Material from industrial sites, spill sites, other environmental remediation sites, or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d) and DER-10 Appendix 5 for residential use. Soil material will be sampled for the full suite of analytical parameters, including PFAS and 1, 4-dioxane. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

E-10 Stormwater Pollution Prevention

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

E-11 excavation Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition. The NYSDEC project manager will be promptly notified of the discovery.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes [TAL metals, TCL volatiles and semi-volatiles (including 1,4-dioxane), TCL pesticides and PCBs, and PFAS], unless the site history and previous sampling results provide sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC project manager for approval prior to sampling. Any tanks will be closed as per NYSDEC regulations and guidance.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone within two hours to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

E-12 Community Air Monitoring Plan

Soils at the Site meet the soil quality standards listed in 375-6.8(b) – Residential Use Soil Cleanup Objectives (6 NYCRR 375-6.8); however, the Site is located in a residential area and a CAMP (Community Air Monitoring Plan) should be followed to prevent fugitive dust and odors from leaving the site. The CAMP will be included as part of the excavation work plan submitted to the NYSDEC and will follow the guidance obtained in Appendix 1B of DER-10, Fugitive Dust and Particulate Monitoring. Due to the proximity of the adjacent residential properties, air sampling stations should be located near the residential houses on the east and west sides of the property, as well as along Willow Street and on the southern edge of the property. These locations may be adjusted on a daily or more frequent basis based on actual wind directions to provide upwind and downwind monitoring stations.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

E-13 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis will include dust suppression with water. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. If necessary, these measures may include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

E-14 Dust Control Plan

Particulate monitoring must be conducted according to the Community Air Monitoring Plan (CAMP) provided in Section E-12. If particulate levels at the site exceed the thresholds listed in the CAMP or if airborne dust is observed on the site or leaving the site, the dust suppression techniques listed below will be employed. The remedial party will also take measures listed below to prevent dust production on the site.

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum:

- Dust suppression will be achieved using a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Spraying water in vulnerable areas, in conjunction with water conservation and runoff management techniques;
- Securing and covering material in open trucks while hauling excavated material, and reusing the covers;
- Revegetating excavated areas as quickly as possible

E-15 Other Nuisances

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.



Attachment E-2
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION



Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e) and 6NYCRR Part 360.13. Use of this form is not a substitute for reading the applicable regulations and Technical Guidance document.

SECTION 1 – SITE BACKGROUND

The allowable site use is:

Have Ecological Resources been identified?

Is this soil originating from the site?

How many cubic yards of soil will be imported/reused?

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone?

Does it contain less than 10%, by weight, material that passes a size 100 sieve?

Is this virgin material from a permitted mine or quarry?

Is this material recycled concrete or brick from a DEC registered processing facility?

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Location where fill was obtained:

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request:

The information provided on this form is accurate and complete.

Signature

Date

Print Name

Firm

APPENDIX F

Site Management Forms

Appendix F
Peters Dry Cleaners, NYSDEC Site No. 932128
316 Willow St, Lockport, NY 14094
Site Annual Inspection Form

A. General Information

Inspector Name(s): _____
 Inspection Date: _____
 Weather (AM/PM): _____
 Purpose for Inspection: _____

 Comments: _____

B. Site Property

Walk through the site and observe the following items

	No	Yes
1. Are there any odors emanating from the site?	_____	_____
2. Are there bare, dead or damaged vegetated areas?	_____	_____
3. Is there any evidence of excavation?	_____	_____
4. Is there visible damage to any of the monitoring wells?	_____	_____
5. Have any groundwater production wells been installed?	_____	_____
6. Were any groundwater samples collected?	_____	_____
If so, what is the sample ID(s)? _____		
6. Was the SSDS at 310 Willow Street inspected?	_____	_____
If so, describe condition: _____		

Comments: (Please comment for each question answered "yes")

 Inspector

 Signature

 Date

 Reviewer

 Date

Summary of Green Remediation Metrics for Site Management

Site Name: _____ Site Code: _____
Address: _____ City: _____
State: _____ Zip Code: _____ County: _____

Initial Report Period (Start Date of period covered by the Initial Report submittal)

Start Date: _____

Current Reporting Period

Reporting Period From: _____ To: _____

Contact Information

Preparer's Name: _____ Phone No.: _____
Preparer's Affiliation: _____

I. Energy Usage: Quantify the amount of energy used directly on-site and the portion of that derived from renewable energy sources.

	Current Reporting Period	Total to Date
Fuel Type 1 (e.g. natural gas (cf))		
Fuel Type 2 (e.g. fuel oil, propane (gals))		
Electricity (kWh)		
Of that Electric usage, provide quantity:		
Derived from renewable sources (e.g. solar, wind)		
Other energy sources (e.g. geothermal, solar thermal (Btu))		

Provide a description of all energy usage reduction programs for the site in the space provided on Page 3.

II. Solid Waste Generation: Quantify the management of solid waste generated on-site.

	Current Reporting Period (tons)	Total to Date (tons)
Total waste generated on-site		
OM&M generated waste		
Of that total amount, provide quantity:		
Transported off-site to landfills		
Transported off-site to other disposal facilities		
Transported off-site for recycling/reuse		
Reused on-site		

Provide a description of any implemented waste reduction programs for the site in the space provided on Page 3.

III. Transportation/Shipping: Quantify the distances travelled for delivery of supplies and lab-supplied bottles, shipping of laboratory samples, and the removal of waste.

	Current Reporting Period (miles)	Total to Date (miles)
Standby Engineer/Contractor		
Laboratory Courier/Delivery Service (bottle and sample delivery)		
Waste Removal/Hauling		

Provide a description of all mileage reduction programs for the site in the space provided on Page 3. Include specifically any local vendor/services utilized that are within 50 miles of the site.

IV. Water Usage: Quantify the volume of water used on-site from various sources.

	Current Reporting Period (gallons)	Total to Date (gallons)
Total quantity of water used on-site (not including treated water)		
Of that total amount, provide quantity:		
Public potable water supply usage		
Surface water usage		
On-site groundwater usage		
Collected or diverted storm water usage		

Provide a description of any implemented water consumption reduction programs for the site in the space provided on Page 3.

V. Land Use and Ecosystems: Quantify the amount of land and/or ecosystems disturbed and the area of land and/or ecosystems restored to a pre-development condition (i.e. Green Infrastructure).

	Current Reporting Period (acres)	Total to Date (acres)
Land disturbed		
Land restored		

Provide a description of any implemented land restoration/green infrastructure programs for the site in the space provided on Page 3.

Description of green remediation programs reported above (Attach additional sheets if needed)
Energy Usage:
Waste Generation:
Transportation/Shipping:
Water usage:
Land Use and Ecosystems:
Recommendations/Other:

CONTRACTOR CERTIFICATION
I, _____ (Name) do hereby certify that I am _____ (Title) of _____ (Contractor Name), which is responsible for the work documented on this form. According to my knowledge and belief, all of the information provided in this form is accurate and the site management program complies with the DER-10, DER-31, and CP-49 policies.
_____ _____ Date Contractor

APPENDIX G

Standard Operating Procedures

SOP # S2

STANDARD OPERATIONG PROCEDURE #S2

WATER LEVEL MEASUREMENT AND MONITORING WELL CONDITION EVALUATION
PROCEDURES

April 20, 2020

NYSDEC Program QAPP – D009809

Revision 0

APPROVED:



Charles Staples, PG, Program Technical Lead

April 27, 2020

Date

Review

Date

WATER LEVEL MEASUREMENT AND MONITORING WELL CONDITION EVALUATION PROCEDURES

1.0 PURPOSE

This Standard Operating Procedure (SOP) was prepared to direct field personnel in the methods for measuring water levels in and evaluating the condition of monitoring wells during field investigations at hazardous and non-hazardous waste sites. The objective of water level measurements is to gain accurate measurements (to within 0.01 feet [ft]) of the depth of ground water for use during well installation, use in preparation of groundwater elevation contour maps, slug tests, packer tests, and pumping tests.

Deviation from this procedure in planning or in the execution of planned activities must be approved by the project manager and documented in the field logbook and/or field data record.

2.0 PROCEDURE

2.1 Responsibilities

Project Manager

The project manager (PM) is responsible for determining the appropriate water level measurement procedures based on the sampling program objectives

Field Operations Lead

The field operations lead (FOL) is responsible for periodic observation of field activities and review of field generated documentation associated with this SOP. The FOL is also responsible for implementation of corrective action (i.e. retraining personnel, additional review of work plans and SOPs, variances to QC sampling requirements, issuing non-conformances, etc.) if problems occur.

Field Personnel

Field personnel assigned to water level measurement activities are responsible for completing tasks according to specifications outlined in this SOP and other appropriate procedures. All staff are responsible for reporting deviations from procedures to the PM or FOL and documenting the deviation in the field logbook and/or field data record.

2.2 Preparation

Office preparation

1. Review pertinent information with regards to well construction, development, and sampling information on the wells to be measured, if available.

2. Assemble appropriate logbooks and field data records to complete the field assignment.
3. Make copies of field data records with water level measurements and the description of monitoring well conditions from the previous sampling event, if available.

Equipment Selection and Sampling Considerations

The following list of equipment may be utilized during water level measurements. Site-specific conditions may warrant the use of additional or deletion of items from this list.

- Electronic water level indicators – graduated with an engineer’s scale at 0.01 ft intervals
- Tap water or Deionized water
- Alconox®, Liquinox® or other non-phosphate concentrated laboratory grade soap
- Pump sprayer
- Pint sized squeeze bottles
- Any necessary personal protective equipment (gloves, eyewear, Tyvek® suits)
- Air monitoring instruments as required (PID or FID as specified in HASP)
- Field logbook
- Monitoring well inventory and/or water level field data records (FDRs) (site specific as needed)
- Well keys
- Previous measurement data (if available)
- Oil/water interface probe (if necessary)
- Engineer’s rule
- Additional weight on tape if required

2.3 Field Procedures

Site-specific conditions may warrant the use of stringent air monitoring and potentially more significant decontamination scenarios.

- Record the condition of the well (protective casing, concrete collar, lock in place, etc.) on the FDR.
- Check that the water level tape has no obvious kinks or damage. If multiple water level meters are to be used, they should be checked for consistency by comparing readings from all meters used at one easily accessible monitoring well.
- Don appropriate PPE for the task and site conditions. Stand upwind of the well; unlock and open the well. If a vented cap is present, conduct well mouth air screening from the vent. If a non-vented well cap is present, remove the cap and screen the well mouth immediately. Record all

pertinent air monitoring results (sustained, dissipating, background, odor) on the FDR and in the field logbook.

- Identify the previous measuring point marking or notch on the riser or casing (if present). Record this location in the field logbook and on the FDR. It is important to always include the measuring point reference with the water level measurement (*e.g.* 7.15 feet below top of PVC riser [TOR]).
- Using a previously decontaminated water level indicator, turn on the meter, check the audible indicator, reel the electronic probe into the well riser (with the increments visible) slowly until the meter sounds, grasp the tape with hand, withdraw the tape and lower it again slowly until the sound is again audible. Check the depth to water on the tape and make a mental note of the depth to within 0.01 feet. Lower the probe again slowly and repeat the measurement for accuracy. If the measurement varies, repeat until a consistent measurement has been determined. It is not uncommon for a well to be under vacuum/pressure and for water in the well to rise or drop after the cap has been opened until the water reaches equilibrium with atmospheric pressure. A one-foot error is the most common measurement type during water level measurements. Be sure to read the depth correctly on the tape.
- Record the depth to water from the measuring point on the FDR. Make sure to include the measuring point reference with the water level measurement.
- Procedures utilized during water level measurements where free phase petroleum products are floating on the water table should be modified to include the use of the oil/water interface probe. The procedures during the use of this probe should be implemented similarly and by manufacturers' specifications. Using this type of probe, the thickness of the product can be determined.
- When measuring the depth to the bottom of the well, care must be taken to accurately determine the true depth to bottom as the graduated tape on a water level indicator will vary with manufacturer. At the start of the field program, using an engineer's rule, measure from the 1-ft graduated mark on the tape to the 0-ft setpoint on the probe. For some manufactures (*e.g.* Heron Instruments) the 0-ft setpoint is the bottom of the probe and depth to bottom measurements can be directly recorded from the graduated tape. Pin style water level indicators (*e.g.* Solinst) typically have a 0-ft setpoint that is halfway up the metallic probe. For these style probes the offset from the bottom of the probe to the point of the pin must be measured and then added to depth to bottom measurements from the graduated tape.

Decontaminate the probe and tape. Refer to the **Field Equipment Decontamination** for guidance.

3.0 ATTACHMENTS

Water Level Measurement and Monitoring Well Condition Field Data Record

Water Level Monitoring Field Data Record

Site Name/Location:

Inspection Date/Initials:

Reviewed By/Date:

Location ID	Measuring Point Elevation (ft. above msl)	Measurement Reference Point Marked (Y/N)	Protective Casing Stickup (ft.)	TOC-TOR Difference (ft.)	Depth to Water (ft.)	Depth to BOW (ft.)	Well ID Clearly Labeled (Y/N)	Guard Posts (G/F/P)	Well Lock/Cap (G/F/P)	Protective Casing (G/F/P)	Water in Annular Space (Y/N)	Concrete Pad (G/F/P)	Well Riser/Cap (G/F/P)	Well Obstruction (Y/N)	Comments
Notes: MW= Monitoring Well msl = mean sea level ft. = feet TOC = top of casing TOR = top of riser F = Fair G = Good N = No P = Poor Y = yes Poor or notable observations require input into "Comments" in. = inches BOW = bottom of well															

SOP # S3

MACTEC STANDARD OPERATING PROCEDURE #S3

LOW FLOW GROUNDWATER SAMPLING PROCEDURES

April 20, 2020

New York State Department of Environmental Conservation

Program QAPP – D009809

Revision 0

APPROVED:



Charles Staples, PG, Program Technical Lead

April 27, 2020

Date

Reviewed

Date

LOW FLOW GROUNDWATER SAMPLING

1.0 PURPOSE

The following steps outline the purging and sample collection activities for low-flow sampling. Data will be recorded on the Low Flow Groundwater Field Data Record (FDR). Construction of monitoring wells may vary; therefore, this SOP may not be applicable to all situations.

This procedure is not intended to obviate the need for professional judgment to accommodate unforeseen circumstances. Deviation from this procedure should be documented in the field logbook and/or field data record.

2.0 REFERENCES

U.S. Environmental Protection Agency (EPA), 2017. Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from monitoring Wells (Revision 4). EQASOP-GW4. Effective date July 30, 1996, Revised September 19, 2017.

3.0 PROCEDURE

This section contains both the responsibilities and procedures involved with sampling environmental monitoring wells. Proper procedures are necessary to ensure the quality and integrity of the samples.

3.1 Responsibilities

Project Manager

The project manager (PM) is responsible for ensuring that sample collection activities are conducted in accordance with this SOP and any other appropriate procedures based on the sampling objectives.

Field Operations Lead

The field operations lead (FOL) is responsible for periodic observation of field activities and review of field generated documentation associated with this SOP. The FOL is also responsible for implementation of corrective action (i.e. retraining personnel, additional review of work plans and SOPs, variances to QC sampling requirements, issuing non-conformances, etc.) if problems occur.

Field Personnel

Field personnel assigned to sampling activities are responsible for completing tasks according to specifications outlined in this SOP and other appropriate procedures. All staff are responsible for reporting deviations from procedures to the PM or FOL and documenting the deviation in the field logbook.

3.2 Preparation

Office Preparation

- Review pertinent information with regards to well construction, development, and sampling information on the wells to be tested, if available.
- Determine target depth for location of the pump intake. Target depth should be the portion of the screened interval that intersects the zone of highest K. If the zone of highest K is unknown, or if the screen is placed within homogenous material, then the target depth shall be the midpoint of the saturated screen length. Primary flow zones should be identified in wells with screen lengths longer than 10 ft.
- Assemble appropriate logbooks and field data records to complete the field assignment.
- Make copies of field data records from the last sampling event.

Equipment Selection

Sampling pumps and water quality probes may vary depending on the well diameter, groundwater constituents and depth to groundwater, but generally, sampling will consist of the following equipment:

- Pump (e.g., peristaltic, bladder, submersible, or inertial) capable of a flow rate between 50 and 500 ml/minute and appropriate power supply. The pump type will principally depend on the depth to water and well diameter. Peristaltic pumps are effective only for wells where the depth to water is less than about 25 ft. Bladder pumps and submersible pumps are most commonly used for wells with depths to water greater than 25 ft. Inertial pumps are only recommended for narrow diameter wells that cannot be sampled using a bladder or peristaltic pump.
- Water quality parameter probes and flow-through cell (e.g., YSI) for measuring pH, temperature, conductivity (and/or specific conductance), dissolved oxygen (DO) and oxidation/reduction potential (ORP) of groundwater
- Turbidity meter (e.g. Hach)
- Calibration solutions for the water quality parameter probes
- Graduated water level indicator (accurate to 0.01 ft)
- Tubing, connections and tools as appropriate
- Graduated cylinder
- Watch or stopwatch
- Purge water container (e.g. 5-gallon bucket or carboy)
- Low flow groundwater sampling record (**example Attached**)
- Personal protection equipment (PPE)
- Decontamination supplies (e.g., DI water, Liquinox® soap, paper towels)
- Sample containers and cooler (provided by the laboratory)

- Ice for sample preservation
- Clean plastic sheeting
- Paper towels.

3.3 Field Procedures

Water quality parameter measurements shall be made using instrumentation and a flow through cell. Water quality parameter instruments will be calibrated daily as per the manufacturer's instructions. Equipment information (make, model, and serial number) and calibration readings shall be recorded on the field instrument calibration record (**example attached**).

Sampling will be conducted using the following procedure:

1. Don appropriate PPE.
2. Measure and record the depth to water and depth to the bottom of the well. Care should be taken to minimize disturbance of the water column within the well during pre-sample measurements.
3. If a submersible pump is used, decontaminate pump prior to use (if pumps are dedicated then this applies to the initial effort only) (**Equipment Decontamination SOP Table A-1**). Attach appropriate length of dedicated tubing or mark the tubing at the appropriate point so that when the pump and tubing are lowered into the well, and the mark is at the top of the well riser, the pump will be located at the target depth within the screened interval.
4. Carefully lower the pump to the predetermined target depth. Start the pump at a purge rate low enough to achieve 0.3 ft of drawdown or less based on historical data. If sampling the well for the first time, start the pump at the lowest possible setting (or approximately 100-ml per minute) and slowly increase the speed until discharge occurs. Check water level. Adjust pump speed until there is little (i.e., less than 0.3 ft) or no drawdown, if possible. If stabilized drawdown cannot be achieved, use the no-purge method described later in this section.
5. Monitor and record pumping rate and water levels every 3 to 5 minutes (or as appropriate) during purging. Appropriate measurement frequency may be calculated using the flow rate and the time required to purge a volume equivalent to that in the sample tubing and flow through cell. Record any adjustments to pumping rates on the FDR.
6. During purging and sampling the tubing should remain filled with water.
7. If there is visible turbidity in the discharge water, continue purging until the turbidity clears up, if possible, before connecting to the flow through cell. Connect the discharge tubing to the flow through cell. The flow through cell cannot be used for turbidity measurements. Turbidity should be measured prior to entering the flow through cell through the use of an inline tee fitting. Purging is considered complete and sampling may begin when the field parameters have stabilized, or the purge time has

exceeded 2 hours. Stabilization is considered to be achieved when three consecutive readings, taken at 3 to 5-minute intervals, are within the following limits:

- o Turbidity (+/- 10% for values >10 NTUs. If turbidity is greater than 10 and does not stabilize, continue purging well for up to two hours, collect sample and document on the FDR and in field logbook. Collection of a filtered sample for metals analysis may be necessary if turbidity is greater than 50 NTUs.)
 - o DO (+/- 10% for values greater than 0.5 milligram per liter (mg/L). If three dissolved oxygen values are < 0.5 mg/L, then DO is considered stabilized)
 - o Specific conductivity (+/- 3%)
 - o Temperature (+/- 3°)
 - o pH (± 0.1 unit)
 - o ORP (± 10 millivolts)
8. To ensure the sample is representative of formation water, the final purge volume must be greater than the volume of the well drawdown (calculated by multiplying the height of the drop in water level by the radius of the well casing squared times pie) plus the volume of the sample tubing.
9. If there is excessive drawdown in the well such that water levels do not stabilize while pumping, the well can be sampled using the no-purge method. For this method, the well is purged until dry and the well allowed to recharge as much as possible. The sample is then collected from the recharged water.
10. To collect the analytical sample, disconnect the tubing from the flow through cell. Water samples for laboratory analyses must not be collected after water has passed through the flow through assembly. Fill sample containers directly from the tubing without alterations to the pumping rate (pumping rate may be lowered for the collection of VOC samples to avoid splashing or overfilling).
11. The volatile organic compound (VOC) fraction shall be collected first. The VOC sample container shall be filled without air space within the container. The VOC container should not be overfilled to avoid diluting the sample preservative. The vial should be 90% filled, and then topped off using water added incrementally from the container cap.
- o Samples will be labelled and handled consistent with the procedures in the QAPP and **Chain of Custody SOP (Table A-1)**.
12. Subsequent sampling efforts should duplicate the pump intake depth and final purge rate from the initial sampling event (use final pump dial setting information).
13. If using non-dedicated equipment, remove the pump from the well and decontaminate by flushing with the decontamination fluid specified in the **Equipment Decontamination SOP (Table A-1)**, or the site-specific FAP. Typically, decontamination will consist of flushing the pump with potable water and Alconox® followed by flushing with deionized water.

14. Complete remaining calculation and entries on the Low flow Groundwater FDR after sampling is completed at each well. Include any observations made during sampling such as color, odor, etc., in the field logbook and FDR.
15. Secure the well cap, compression plug, and lock.

4.0 ATTACHMENTS

Low Flow Groundwater Sampling Record

Field Instrument Calibration Record

Information Handout: Low Flow Groundwater Field Parameter Data

MACTEC

PROJECT NAME	
PROJECT NUMBER	
SAMPLE ID	SAMPLE TIME

LOCATION ID	DATE
START TIME	END TIME
SITE NAME/INSTALLATION	PAGE OF

WELL DIAMETER (IN.) 1 2 4 6 8 OTHER _____
TUBING ID (INCHES) 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
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

INITIAL DTW (BMP)	FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	FT	SCREEN INTERVAL	FT	PID AMBIENT AIR	NA PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	FT	DRAWDOWN VOLUME	GAL	PID WELL MOUTH	NA PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL	GAL	TOTAL VOL. PURGED	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	NA PSI
(water column X well diameter ² X 0.041)		(final DTW- initial DTW X well diam. squared X 0.041)					
		(mL per minute X total minutes X 0.00026 gal/mL)					

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

[illegible]

FINAL STABILIZED FIELD PARAMETERS (rounded to appropriate significant figures)

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 significant figure max (ex. 1.686 = 1.69)
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		DECON FLUIDS USED		TUBING/PUMP/BLADDER MATERIALS		EQUIPMENT USED	
	PERISTALTIC		ALCONOX		S. STEEL PUMP MATERIAL		WL METER _____
	SUBMERSIBLE		DEIONIZED WATER		PVC PUMP MATERIAL		PID _____
	BLADDER _____		POTABLE WATER		GEOPROBE SCREEN		WQ METER _____
	WATTERA _____		NITRIC ACID		OTHER _____		TURB. METER _____
	OTHER _____		HEXANE		OTHER _____		PUMP _____
	OTHER _____		METHANOL		OTHER _____		OTHER _____
			OTHER _____				<u>FILTERS</u> NO. _____ TYPE _____

ANALYTICAL PARAMETERS

[illegible]

PURGE OBSERVATIONS			
PURGE WATER	YES	NO	NUMBER OF GALLONS GENERATED _____
CONTAINERIZED	☐	☐	
NO-PURGE METHOD	YES	NO	
UTILIZED	☐	☐	

NOTES

DEVIATIONS FROM THE WORK PLAN

Sampler Signature: _____ Print Name: _____
 Checked By: _____ Date: _____

FIELD INSTRUMENT CALIBRATION RECORD

PROJECT NAME: _____

PROJECT NUMBER: _____

PROJECT LOCATION: _____

WEATHER CONDITIONS (AM): _____

WEATHER CONDITIONS (PM): _____

TASK NO: _____

DATE: _____

MACTEC CREW: _____

SAMPLER NAME: _____

SAMPLER SIGNATURE: _____

CHECKED BY: _____

DATE: _____

MULTI-PARAMETER WATER QUALITY METER

METER TYPE _____

MODEL NO. _____

UNIT ID NO. _____

AM CALIBRATION

Start Time _____/End Time _____

	Units	Standard Value	Meter Value	*Acceptance Criteria (AM)
pH (4)	SU	4.0	_____	+/- 0.1 pH Units
pH (7)	SU	7.0	_____	+/- 0.1 pH Units
pH (10)	SU	10.0	_____	+/- 0.1 pH Units
Redox	+/- mV	240	_____	+/- 10 mV
Conductivity	mS/cm	1.413	_____	+/- 0.5 % of standard
DO (saturated)	%	100	_____	+/- 2% of standard
DO (saturated)	mg/L ¹ (see Chart 1)		_____	+/- 0.2 mg/L
DO (<0.1)	mg/L	<0.1	_____	< 0.5 mg/L
Temperature	°C		_____	
Baro. Press.	mmHg		_____	

POST CALIBRATION CHECK

Start Time _____/End Time _____

Standard Value	Meter Value	*Acceptance Criteria (PM)
7.0	_____	+/- 0.3 pH Units
240	_____	+/- 10 mV
1.413	_____	+/- 5% of standard
_____	_____	+/- 0.5 mg/L of standard

TURBIDITY METER

METER TYPE _____

MODEL NO. _____

UNIT ID NO. _____

	Units	Standard Value	Meter Value
<0.1 Standard	NTU	<0.1	_____
20 Standard	NTU	20	_____
100 Standard	NTU	100	_____
800 Standard	NTU	800	_____

Standard Value	Meter Value	*Acceptance Criteria (PM)
<0.1	_____	+/- 0.3 NTU of stan.
20	_____	+/- 5% of standard
100	_____	+/- 5% of standard
800	_____	+/- 5% of standard

PHOTOIONIZATION DETECTOR

METER TYPE _____

MODEL NO. _____

UNIT ID NO. _____

Background	ppmv	<0.1	_____
Span Gas	ppmv	100	_____

<0.1	_____	within 5 ppmv of BG
100	_____	+/- 10% of standard

O₂-LEL 4 GAS METER

METER TYPE _____

MODEL NO. _____

UNIT ID NO. _____

Methane	%	50	_____
O ₂	%	20.9	_____
H ₂ S	ppmv	25	_____
CO	ppmv	50	_____

50	_____	+/- 10% of standard
20.9	_____	+/- 10% of standard
25	_____	+/- 10% of standard
50	_____	+/- 10% of standard

OTHER METER

METER TYPE _____

MODEL NO. _____

UNIT ID NO. _____

_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

_____	_____	See Notes Below for Additional Information
_____	_____	
_____	_____	

☐ Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.

☐ Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above**.

MATERIALS RECORD

Deionized Water Source: _____

Lot#/Date Produced: _____

Trip Blank Source: _____

Sample Preservatives Source: _____

Disposable Filter Type: _____

Calibration Fluids / Standard Source:

- DO Calibration Fluid (<0.1 mg/L) _____

- Other _____

- Other _____

- Other _____

Cal. Standard Lot Number

pH (4) _____

pH (7) _____

pH (10) _____

ORP _____

Conductivity _____

<0.1 Turb. Stan. _____

20 Turb. Stan. _____

100 Turb. Stan. _____

800 Turb. Stan. _____

PID Span Gas _____

O₂-LEL Span Gas _____

Other _____

Exp. Date

NOTES:

* = Unless otherwise noted, calibration procedures and acceptance criteria are in general accordance with USEPA Region 1 SOPs for Field Instrument Calibration (EQASOP-FieldCalibrat) and Low Stress Purging and Sampling (EQASOP-GW001), each dated 1/19/2010. Additional acceptance criteria obtained from instrument specific manufacturer recommendations.

** = If meter reading is not within acceptance criteria, clean/replace probe and re-calibrate, or use calibrated back-up meter if available. If project requirements necessitate use of the instrument, clearly document any deviations from acceptance criteria on all data sheets and log book entries.

1 = DO Saturated standard value is calculated based on Oxygen Solubility at Indicated Pressure Chart from the USEPA Region 1 SOP for Field Instrument Calibration (EQASOP-FieldCalibrat), dated 1/19/2010.

MACTEC

511 Congress Street, Portland Maine 04101

FIELD INSTRUMENT CALIBRATION RECORD

2-Field Instrument Calibration Record

4/21/2020

NYSDEC Field Programs
Information Handout: Low Flow Groundwater Field Parameter Data
March 2017, Revised April 2020

INTRODUCTION

This sheet provides information related to field data collection during low flow groundwater sampling including: temperature, pH, turbidity, conductivity, dissolved oxygen (DO), and oxidation/reduction potential (ORP). The goal of this handout is to provide a general understanding of the data being collected to assist staff with identify situations where data may not be accurate due to improper instrument calibration or instrument error.

Documents containing additional information are provided as attachments including:

- USEPA Region 1 Standard Operating Procedure Calibration of Field Instruments (Attachment 1)
- USEPA Region 1 Low Stress (Low Flow) Purging And Sampling Procedure For The Collection Of Groundwater Samples From Monitoring Wells (Attachment 2)
- instrument information pamphlets provided by Pine Environmental (Attachment 3), and
- a link to the USGS National Field Manual website.

GENERAL CONSIDERATIONS FOR FIELD EVENTS

- Review NYSDEC Program QAPP SOPs and Project Field Activities Plan (FAP)
- Record field data on appropriate Field Data Record (FDR)
- Avoid storing equipment/instruments for long periods in extreme cold or hot conditions that might occurred in parked car in the field
- Calibrate instruments in controlled environment (room temp if possible).
- Do not get turbidity meters wet. All other equipment is typically more water resistant but is not waterproof. Care should be taken to protect all equipment during rain events.
- Record field parameter results as displayed on the instrument. Significant figures and rounding will be applied later during data summary process.
- For questions regarding equipment contact the Field Operations Lead or Bruce Cunningham 207 828-3657 if equipment is obtained from Field Operations Support group in Portland (FOS).

LOW FLOW GROUNDWATER FIELD DATA

Instruments used for low flow groundwater sampling that are currently provided by the FOS group in Portland, Maine include:

- YSI 556 Multiparameter System
- HACH 2100P Turbidimeter or HACH 2100Q
- Water level indicator

Instructions on instrument calibration, maintenance and operation which are provided by Pine Environmental Services are included in Attachment 3.

Temperature

Units: Temperature should be measured in degrees Celsius (°C).

Calibration – Thermometers are not calibrated by field staff, they are checked against a NIST Thermometer annually. Record of annual calibration filed in Portland FOS with Bruce Cunningham. If the instrument readings are questionable it can be checked with ice water which should be register approximately 0 °C

Other considerations: Some field parameters are corrected based on temperature (pH, dissolved oxygen, and specific conductance). So it is important that the temperature is correct.

Typical measurements: Average groundwater temperatures in the Northeast range from approximately 5.5 °C in Maine to 11 °C in southern New York. Seasonal temperatures vary by as much as ± 10 °C in shallow wells and less in deeper wells.

pH

Units: pH is measured in pH standard units (SU) on a scale of 0-14. The pH (power of hydrogen) scale measures the concentration of hydrogen ions in solution.

Calibration – pH will be calibrated prior to mobilization to the field and daily once prior to conducting field activities and once after sampling is complete. pH will be calibrated with 2 or 3 solutions (based on project requirements) covering the expected range. Typically pH 4 and pH 7 (and pH 10 if a third solution is required) will be used. Acceptance criteria is ± 0.1 for the AM check and ± 0.3 at pH 7 for the PM check. Rinse and dry the probe between solution checks.

Maintenance and Corrective Actions: pH is measured through the glass bulb located on the end of the probe. Do not touch the glass bulb with fingers. Oily film or scratches on the bulb will interfere with the design characteristics of the glass membrane and affect pH measurements. Do not use the instrument if the bulb is broken or scratched or if the electrode body is cracked, broken or the internal electrode has been damaged. If necessary, the probe can be replaced either through FOS or the rental company.

Typical measurements: Most groundwater in the US has pH ranging from 6 to 8.5 SU and surface water ranges from 6.5 to 8.5 SU. The pH of distilled water is usually around 5.6 SU due to dissolved CO₂ and the formation of carbonic acid.

Oxidation/Reduction Potential (ORP)

Units: ORP (also referred to as redox potential [Eh]) is a measure of the intensity of electron activity between two electrodes. ORP is measured in millivolts (mV).

Calibration: ORP will be calibrated prior to mobilization to the field and daily prior to conducting field activities. The instrument should be allowed to stabilize before running daily calibrations and should be adjusted for temperature according to the manufactures specifications. Our typical calibration solution has a value of 240 mV with an acceptance criteria of ± 10 mV.

Maintenance and Corrective Actions: If calibration readings are not within acceptance criteria the electrodes may need to be cleaned. Cleaning instructions are provided in the YSI technical notes or contact Bruce Cunningham for assistance. Alternatively new calibration solutions may be needed.

Typical measurements: ORP will vary from site to site and within sites depending on a variety of factors including dissolved chemicals (metals and other compounds), and pH. In general, positive values indicate an oxidizing environment and negative values indicate a reducing environment.

Redox conditions can affect the presence of dissolved chemicals in water. Iron (ferrous iron) and dissolved manganese are often present in reducing conditions and hexavalent chromium (Cr₆) might be found in oxidizing conditions.

Specific Conductance (conductivity)

Units: Conductivity is measured in Siemens (S) and distance. Field data records typically use millisiemens per centimeter (mS/cm), but instruments may provide data in other converted forms ($10^6 \mu\text{S/cm} = 10^3 \text{ mS/cm} = 1 \text{ S/cm}$). mho may also be used as a unit of measure for conductivity; this is numerically the same S.

Calibration: Conductivity will be calibrated prior to mobilization to the field and daily once prior to conducting field activities and once after sampling is completed. Daily calibration is a check against a standard of known concentration. Acceptance criteria for conductivity is $\pm 0.5\%$ for the AM check and $\pm 5\%$ for the post sampling check.

Maintenance and Corrective Actions: If calibration readings are not within the acceptance criteria, the electrodes may need to be cleaned. Contact Bruce Cunningham if equipment was obtained from FOS and he will provide instructions as appropriate.

Because the actual conductivity of a solution changes with temperature, conductivity measurements are automatically normalized to 25°C by the field instrument.

Typical measurements:

Distilled Water: 0.0005 mS/cm

Deionized water: 0.00001 – 0.001 mS/cm

Tap Water: 0.5 – 0.8 mS/cm

Drinking water: 0.05 – 0.5 mS/cm

Groundwater: 0.05 – 50 mS/cm

Surface Water: 0.01 – 4 mS/cm

Sea water: 50 mS/cm

Dissolved Oxygen

Units: Instrumentation will report DO values as either percent saturation or ppm (mg/L) units. Field data should be reported in mg/L.

Calibration: DO instrument calibration check will be conducted prior to mobilization to the field and daily once prior to conducting field activities and once after sampling is complete. Calibration checks are conducted using an oxygen saturated solution and DO free solution (if require for the field program).

Calibration for DO must be adjusted based on air pressure (mmHg) and temp (°C). Use Pressure and Temperature Chart to determine saturated solution concentration (Attachment 4). Air pressure readings can be obtained from <http://weather.noaa.gov/>. Barometric pressure is often in inches Hg which can be converted to mm by multiplying inches by 25.4.

Acceptance criteria:

DO saturation solution $\pm 2\%$ (0.2 mg/L) AM calibration and $\pm 5\%$ (0.5 mg/L) PM calibration.

Zero solution: $< 5\%$ (0.5 mg/L) both AM and PM.

Maintenance and Corrective Actions: The DO sensor should not be allowed to dry out and should be kept moist during storage. Method performance can be negatively affected by the following:

- calibration drift
- a loose, wrinkled, or damaged membrane
- air bubbles in the electrolyte solution
- loose-fitting O-rings and membranes
- damaged, dirty, or otherwise contaminated electrodes under the membrane.

If there is a problem with the membrane, follow instructions that are included with the instrument on how to repair or replace the membrane or contact Bruce Cunningham at FOS with questions.

Typical measurements: Groundwater DO can range from near saturation (approximately 14 mg/L) in locations where the water table is near the ground surface to <2 mg/L. Although low DO could be the result of many factors, it may indicate reducing groundwater conditions due to:

- proximity to wetlands
- landfills
- VOC plumes

Turbidity

Units: Turbidity is a measure of how light is scattered or absorbed and is measured in NTU (Nephelometric Turbidity Units).

Calibration: Initial instrument calibration is completed by the manufacturer or FOS. Check standards should be run daily prior to use in the field with commercial reference standards. Acceptance criteria is $\pm 5\%$. Check standard vials should be cleaned prior to use.

Maintenance and Corrective Actions: Dirty or scratched vials/cell or air bubbles can give false results. It is important to make sure the sample vial is clean. If there are visible scratches replace the sample vial.

Typical measurements: Clean drinking water has turbidity <5 NTU. Turbidity <50 NTU may not be visually noticeable.

Additional Information:

Additional documents that provide useful include:

- USEPA Region 1 Standard Operating Procedure Calibration of Field Instruments; Quality Assurance Unit, USEPA Region I, 11 Technology Drive, North Chelmsford, MA 01863. Jan 2010.
- USEPA Region 1 Low Stress (Low Flow) Purging And Sampling Procedure For The Collection Of Groundwater Samples From Monitoring Wells (Revision 4). EQASOP-GW4. Effective date July 30, 1996, Revised September 19, 2017.
- Various information provided by instrument manufacturers
<http://www.fielDENvironmental.com/assets/files/Manuals/YSI%20556%20MPS%20Manual.pdf>; <https://www.ysi.com/parameters/dissolved-oxygen?Dissolved-Oxygen-1>
- USGS National Field Manual for the Collection of Water-Quality Data,
<http://water.usgs.gov/owq/FieldManual/>

APPENDIX H

Health and Safety Plan

Site-Specific Health and Safety Plan Short Form

Site: Peters Dry Cleaning, NYSDEC Site No. 932128 Job #/Task # 3616206103
 Street Address: 316 Willow Street, Lockport, NY 14094
 Proposed Date(s) of Investigation: 2023
 Prepared by: Renee Dugal Date: 8/15/23
 *Approved by: Chuck Staples Date: _____
 Site Description: **(see attached map)** The former Peters Dry Cleaners is currently a generally flat 0.41 acre, open primarily gravel covered lot in a residential neighborhood.
 Comments: NYSDEC – Pre-Injection Groundwater Sampling and Injection Well Drilling

*Approval also serves as certification of a Hazard Assessment as required by 29 CFR 1910.132

Overall Project Characterization “Color” (See [SMARTool Form](#)):

☒ Green ☐ Yellow ☐ Orange 1 ☐ Orange 2 ☐ Orange 3 ☐ Red

Tasks:

Wood	Sub	Task Description	AHA Attached?
☒	☐	Groundwater sampling	☒
☐	☒	Micro Well and Injection Well Installation	☒
☐	☒	Biological Amendments Injection	☒
☐	☐		☐

High Hazard Activities:

Wood	Sub	Activity	Wood	Sub	Activity
☐	☐	Confined space entry	☒	☒	Operating drill rig
☐	☐	Entering excavations	☐	☐	Operating other heavy equipment
☐	☐	Hot work	☐	☐	Using aerial lift
☐	☐	Lockout/tagout	☐	☐	Working from scaffolding
☐	☐	Operating forklift	☐	☐	Working at heights >6 feet

Stand up for Safety:

The above tasks could expose Wood E&IS employees and subcontractors to hazards associated with the following Stand up for Safety Initiatives:

- ☒ Driving
- ☐ Dropped Objects
- ☐ Energy Isolation (Lockout/Tagout)
- ☐ Working at Height

Life Saving Rules:

The following Wood Life Saving Rules potentially apply to the work being conducted at the site:

- ☐ **Bypassing Safety Controls** - Obtain authorization before overriding or disabling safety controls
- ☐ **Confined Space** - Obtain authorization before entering a confined space
- ☒ **Driving** - Follow safe driving rules
- ☐ **Energy Isolation** - Verify isolation and zero energy before work begins

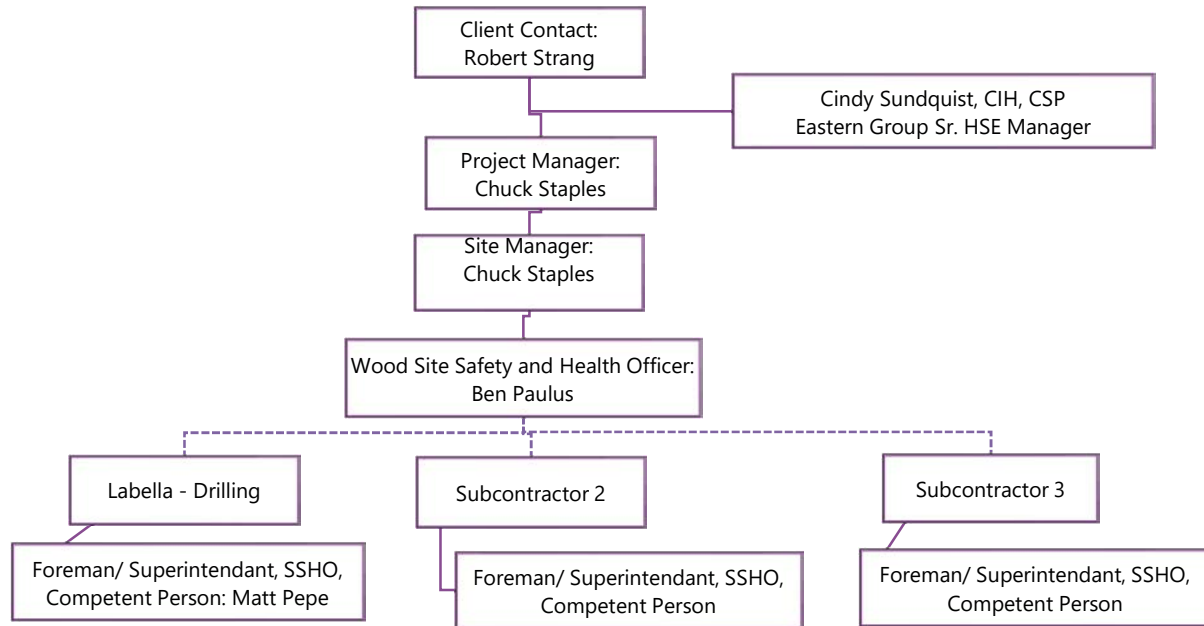


Site-Specific Health and Safety Plan Short Form



- Hot Work** - Control flammables and ignition sources
- Line of Fire** - Keep yourself and others out of the line of fire
- Safe Mechanical Lifting** - Plan lifting operations and control the area
- Work Authorization** - Work with a valid permit when required
- Working at Height** - Protect yourself against a fall when working at height

Project Organization Chart:



Dates of Required Training and Medical Surveillance:

Add additional training topics, as required. **Verify training in online training database:** [LINK](#)

Name:	Ben Paulus	Colby Jacques			
Job duties:	Field Lead	Field Staff			
	Dates	Dates	Dates	Dates	Dates
Medical Surveillance	9/6/2023				
-Exam Type (A, B, C) ³	B				
40-Hour Initial	9/9/2016				
8-Hour Supervisor ²	11/17/2022				
8-Hour Refresher	11/17/2022				
First Aid ¹	6/27/2023				
CPR ¹	6/27/2023				
Hazard Communication	--				
Fire Extinguisher	--				

¹ At least one worker must be trained in First Aid/CPR

² Required for Site Manager and Site Health and Safety Officer

³ **Medical Surveillance Exam A has no respiratory clearance so can only be used for Level D PPE.** . Exam A (basic HAZWOPER), Exam B (respirator & HAZWOPER under 40 years old), Exam C (respirator & HAZWOPER over 40 years old), Exam E (DOT), Exam F (asbestos monitoring), Exam G (lead monitoring) etc. **Contact HSE Coordinator or Cindy Sundquist to determine type of exam employee received.**

Site-Specific Health and Safety Plan Short Form

GOALS/TARGETS:

The following goals/targets have been established for the project:

- ☒ Zero OSHA Recordable Incidents
- ☐ Weekly HSE Inspections (documented)
- ☐ Leadership (PM) HSSE Inspections
- ☒ HEART observations per day/week/month
- ☐

Meetings:

The following meetings will be held at the site:

Meeting	Lead by		Frequency				
	Wood	Sub	Initial	Daily	Weekly	Monthly	As Needed
☐ Project Kick-off ¹	☒	☐	☒	☐	☐	☐	☐
☐ Tailgate ²	☒	☐	☐	☒	☐	☐	☐
☐ Safety Committee ¹	☐	☐	☐	☐	☐	☐	☐
☐ Incident Reviews ¹	☐	☐	☐	☐	☐	☐	☐
☐ E&IS Monthly Safety Topics ¹	☐	☐	☐	☐	☐	☐	☐
☐ HSSE Closeout Meetings ¹	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐

¹ Attended by subcontractor management representative

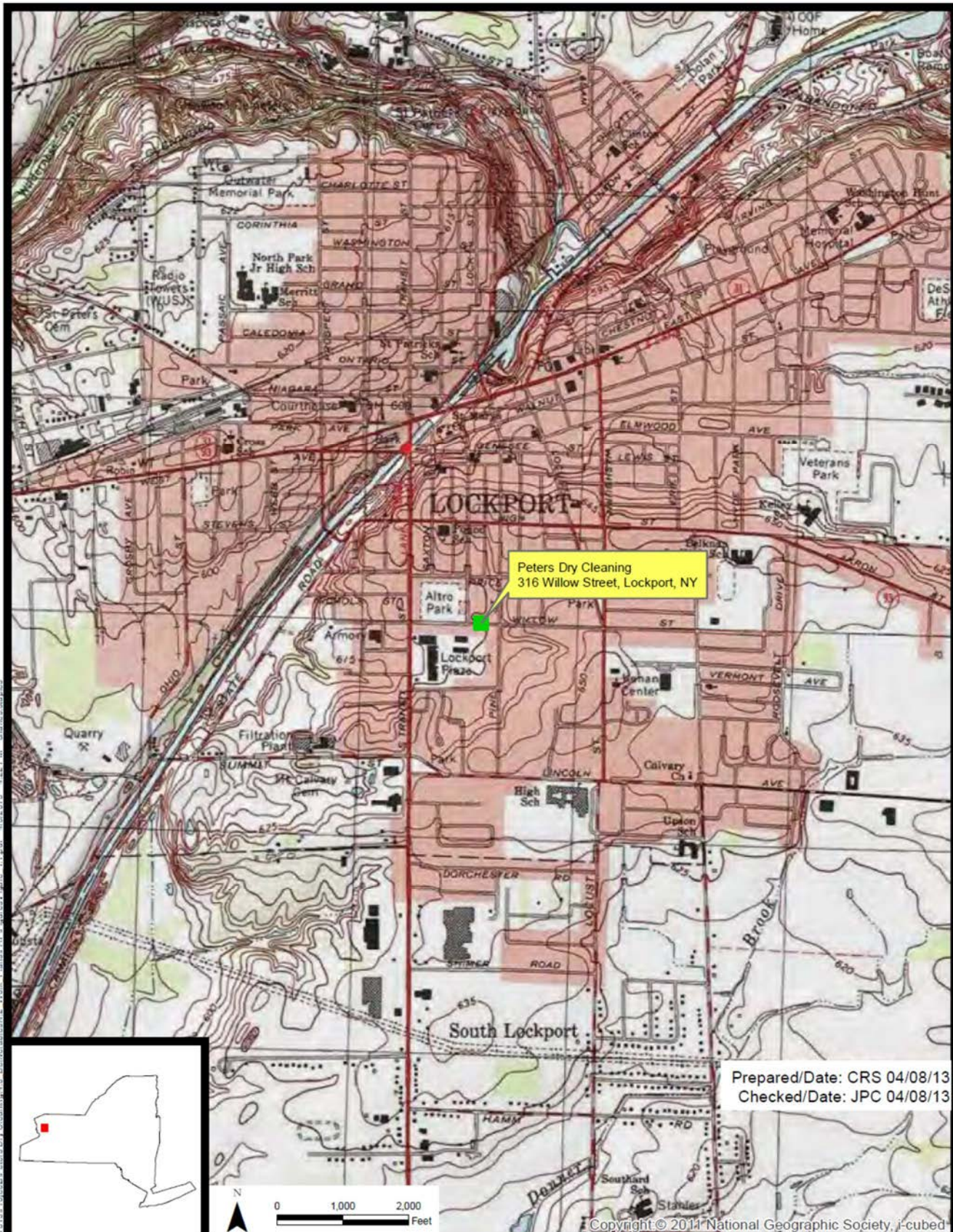
² Attended by all subcontractor employees and supervisors.

Inspections:

Regular inspections will be conducted by Wood E&IS and/or subcontractor personnel. Inspections will be documented, and corrective actions established for all findings. Corrective actions will be tracked to closure. HEART observations will be entered into the HEART database.

Inspection Type	Lead by		Frequency			Before Use
	Wood	Sub	Daily	Weekly	Monthly	
☐ HSE (Visual)	☐	☐	☐	☐	☐	☐
☐ HSE (Documented)	☐	☐	☐	☐	☐	☐
☐ Leadership HSE (e.g., PM)	☐	☐	☐	☐	☐	☐
☐ Scaffolding	☐	☐	☐	☐	☐	☐
☐ Excavations	☐	☐	☐	☐	☐	☐
☒ Heavy Equipment	☐	☒	☒	☐	☐	☐
☒ PPE	☒	☐	☐	☐	☐	☒
☒ Tools/Equipment	☒	☐	☐	☐	☐	☒
☒ HEART/Observations	☒	☐	☒	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐

Site-Specific Health and Safety Plan Short Form



NYSDEC Site No. 932128
Peters Dry Cleaning
Lockport, New York



Site Location
Project 3616206103
Figure 1

Site-Specific Health and Safety Plan Short Form

Journey Management Plan:

A Journey Management Plan will be developed to address non-routine/non-commute type travel to and from the project site. Considerations will include anticipated weather, work duration prior to travel, travel route, etc. See the Vehicle Travel – Journey Management Plan AHA.

JOURNEY MANAGEMENT PLANNING		
<i>All projects with a field component must have a journey management plan completed for each work location. Complete the below as accurately as possible with your knowledge of the project, site location, time of year, etc. If there are significant changes to the scope of the project, or the conditions of travel, the plan must be updated, or new journey management plan must be completed.</i> <i>Not required for city or urban driving</i>		
	Points	List Control Measures
1. How many total hours will the driver have been on duty at the end of the journey? Note: Maximum 14 duty hours permitted. (12+ hours = 10 pts)		
2.		
3. Will the journey require driving in wet, flooded, icy, and/or snowy roads? (Yes = 10 pts)		
4. Will the journey require driving in conditions that limit visibility (dark, fog, snow, hail, etc.)? (Yes = 10 pts)		
5. Will the journey require driving overnight (after 9pm - 5am)? (Yes = 10 pts)		
6. Is the driver familiar with the route for this journey? (No = 5 pts)	5	
7. How many hours of sleep has the driver had in the past 24 hours? (If < 8 hrs = 5 pts)		
8. Will there be a passenger in the vehicle during the journey? (No = 5 pts)	5	
9. Is heavy traffic congestion expected during the journey? (Yes = 5 pts)		
10. Was a pre-trip inspection performed (walk around, towing, load securement, etc.)? (No = 5 pts)		
11. Is the vehicle towing a heavy or oversized load OR permit required? (Yes = 5 pts)		
12. Will the driver encounter unpaved or mountainous road conditions? (Yes = 5 pts)		
13. In case of emergency, will the driver have suitable means of communication? (No = 5 pts)		
14. Are there elevated security risks associated with this journey? (Yes = 5 pts)		
15. Is there an elevated risk of striking an animal on the roadway during this journey? (Yes = 5 pts)		
TOTAL	10	Low Risk = 0-25 pts, Medium Risk = 30-55 pts requires mitigation, High = 60 or more requires Management Approval
Workers must also establish a check in/check out system for any project where there is significant driving and where they will not be returning to the office at the end of the day. This process should be documented.		

Known or Suspected Contaminants (include PELs/TLVs): [LINK to COC Library](#)

Contaminants of Concern (COC) (Attach Fact Sheets*)	Maximum Concentrations		PEL/TLV**
	Soil (mg/kg)	Water/Groundwater (µg/l)	
Tetrachloroethene (PCE)	NA	290 (2017)	PEL: 100 ppm TLV: 25 ppm
Trichloroethene (TCE)	NA	33 (2017)	PEL: 100 ppm TLV: 10 ppm
Cis-1,1 Dichloroethene	NA	1700 (2017)	PEL: 200 ppm TLV: 200 ppm
Vinyl Chloride	NA	360 (2017)	PEL: 1 ppm TLV: 1 ppm

*Workers must be made aware of the signs, symptoms, and first aid for each COC. Information is located on the COC fact sheets.

**See [LINK](#) for OSHA PELs and ACGIH TLVs

Air Monitoring Action Levels:

PID/FID Reading ¹	Detector Tube ¹	Dust Meter ¹	LEL ² /O ₂ ¹	Action
No VOC monitoring planned – Soils remediated.			> 10% LEL	Stop work. Evacuate area. Consider return with ventilation system and spark proof/intrinsically safe equipment.
			< 19.5% O ₂	Stop work and evacuate area.

¹ Sustained readings measured in the breathing zone

² Readings at measured at the source (borehole, well, etc.)

AHAs:

Check and attach all that apply (add applicable AHAs not already listed) ([LINK to AHA Library](#)):

Activity Specific AHAs:

- ☒ Mobilization/Demobilization and Site Preparation
- ☒ Vehicle Travel – Journey Management Plan
- ☒ Field Work - General
- ☒ Decontamination
- ☒ Hostile Public Interactions
- ☒ Groundwater Sampling
- ☒ Travel To / From Office or Project Site During Covid-19 Considerations
- ☒ Site Activities During Covid-19 Pandemic
- ☒ Field Work Oversight
- ☒ Geoprobe Oversight
- ☐

Hazard Specific AHAs:

- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐

PPE and Monitoring Instruments:

Initial Level of PPE *

- ☐ Level D
 ☒ Modified Level D
 ☐ Level C
 * Cannot use Short Form HASP for Level B or A or Confined Space Entry work

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Standard PPE

☐ Hard Hat ☒ Safety boots ☒ Safety glasses ☒ High visibility vest/clothing

Eye and Face Protection

☐ Face shield ☐ Vented goggles ☐ Unvented goggles ☐ Indirect vented goggles

Hearing Protection

☐ None ☒ Ear plugs ☐ Ear Muffs ☐ Ear plugs and muffs

Respiratory Protection

☒ None ☐ Upgrade Only ☐ Dust mask ☐ Full Face APR ☐ Half Face APR
Cartridge Type: _____ Change Cartridges: _____

Protective Clothing

☒ Work uniform ☐ White uncoated Tyvek® ☐ Poly-coated Tyvek® ☐ Saranex®
☐ Boot covers ☐ Reflective vest/clothing ☐ Chaps or Snake Legs
Other: _____

Hand Protection

☐ None ☐ Cotton gloves ☐ Leather gloves ☐ Glove liners ☐ Cut-resistant gloves ☒ Other: Nitrile
☒ Outer Gloves: List Type: _____
☐ Inner Gloves: List Type: _____

Monitoring Instruments Required*

Periodic monitoring shall be conducted when the possibility of an IDLH condition or flammable atmosphere has developed or when there is indication that exposures may have risen over permissible exposure limits or published exposure levels since prior monitoring. Situations where it shall be considered whether the possibility that exposures have risen are as follows:

- When work begins on a different portion of the site.
- When contaminants other than those previously identified are being handled.
- When a different type of operation is initiated (e.g., drum opening as opposed to exploratory well drilling.)
- When employees are handling leaking drums or containers or working in areas with obvious liquid contamination (e.g., a spill or lagoon.)

☐ LEL/O2 Meter ☐ PID: ☐ 10.0/10.6 eV Lamp ☐ FID ☐ Hydrogen Sulfide meter
☐ 11.7 eV Lamp ☐ Carbon Monoxide meter

☐ Dräger Pump (or equivalent) ☐ Dust Meter: ☐ Respirable dust ☐ Other: _____
☐ Total dust

List Tubes: _____

*Monitoring instruments will be calibrated daily in accordance with manufacturer's instructions. Results will be recorded in the field logbook.

Chemicals Brought to the Site:

List all chemicals brought to the site (e.g., preservatives, decon solutions, calibration gases, gasoline, etc.).

Product Identifier: (Note: Name listed below must match name on label and SDS)

LIQUINOX/ALCONOX

SDS Attached?





HYDROCHLORIC ACID
NITRIC ACID



Chemicals will be kept in their original containers. If transferred to another container, aside from day use by one individual, the new container will be clearly labeled with the name of the chemical (product identifier), signal word, hazard statement, pictogram(s), precautionary statement, and name, address and telephone number of the chemical manufacturer, importer or other responsible party.

Work Zones:

The work zones will be defined relative to the location of the work activity. The Exclusion Zone is considered the area within a 10-foot diameter of the sampling location. The Contamination Reduction Zone is considered to be the area with in a 20-foot diameter of the sampling location. The Decontamination Zone is to be located upwind of the work area. Work zones will be maintained through the use of:

- ☐ Warning Tape
- ☐ Cones and Barriers
- ☒ Visual Observations

Decontamination Procedures and Equipment:

Note: See Decontamination AHA for further information

Level D Decontamination Procedures

Decontamination Solution:	Detergent and Water
Station 1: Equipment Drop	Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, etc. on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool-down station may be set up within this area.
Station 2: Outer Boots, and Gloves Wash and Rinse (if worn)	Scrub outer boots, and outer gloves decon solution or detergent water. Rinse off using copious amounts of water.
Station 3: Outer Boot and Glove Removal (if worn)	Remove outer boots and gloves. Deposit in plastic bag.
Station 4: Inner glove removal	Remove inner gloves and place in plastic bag.
Station 5: Field Wash	Hands and face are thoroughly washed. Shower as soon as possible.

Modified Level D and Level C PPE Decontamination Procedures

Decontamination Solution:	Detergent and Water
Station 1: Equipment Drop	Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, etc. on plastic drop cloths. Segregation at the drop reduces the probability of cross



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Short Form HASP



Station 2: Outer Garment, Boots, and Gloves Wash and Rinse	contamination. During hot weather operations, a cool-down station may be set up within this area.
Station 3: Outer Boot and Glove Removal	Scrub outer boots, outer gloves, and splash suit with decon solution or detergent water. Rinse off using copious amounts of water.
Station 4: Canister or Mask (Level C only) Change	Remove outer boots and gloves. Deposit in container with plastic liner.
Station 5: Boot, Gloves and Outer Garment Removal	If worker leaves exclusion zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot covers are donned, joints are taped, and worker returns to duty.
Station 6: Face Piece Removal (Level C only)	Boots, chemical resistant splash suit, and inner gloves are removed and deposited in separate containers lined with plastic.
Station 7: Field Wash	Facepiece is removed. Avoid touching face with fingers. Facepiece is deposited on plastic sheet.
	Hands and face are thoroughly washed. Shower as soon as possible.

Site Communication:

☒	Verbal	
☐	Two-way radio	
☒	Cellular telephone	
☐	Hand signals	
	▪ Hand gripping throat Out of air, can't breathe ▪ Grip partner's wrist or both hands around waist Leave area immediately ▪ Hands on top of head Need assistance ▪ Thumbs up OK, I am all right, I understand ▪ Thumbs down No, negative	
☐	Horn	
☐	Siren	
☐	Other: _____	



EMERGENCY CONTACTS

NAME	TELEPHONE NUMBERS		DATE OF PRE-EMERGENCY NOTIFICATION (if applicable)
Fire Department: Lockport Fire Department	911 / non-emergency 716-439-6611		
Hospital: Eastern Niagra Hospital	716-514-5800		
WorkCare (Early case management)	1-888-449-7787		
Police Department: Lockport Police Dept.	911 / non-emergency 716-433-7700		
	Office	Cell	
Site Safety and Health Officer: Tyler Hengen	724-514-1655	605-430-2848	
Client Contact: Jasmine Stefansky	518-402-9575		
Project Manager: Chuck Staples	207-828-3429	585-919-9295	
*Eastern and LA Group Sr. HSE Manager: Cindy Sundquist	207-828-3309	207-650-7593 (Cell) 207-892-4402 (Home)	
Corporate SVP of HSE: Vlad Ivensky	610-877-6144	484-919-5175 (Cell) 215-947-0393 (Home)	
EPA/DEP (if applicable):			
Other: Ambulance	911		

*See Incident Flow Chart for additional Group HSE Manager's Contact Information

Emergency Equipment:

The following emergency response equipment is required for this project and shall be readily available:

- ☒ Field First Aid Kit (including bloodborne pathogen kit/supplies)
- ☐ Fire Extinguisher (ABC type)
- ☐ Eyewash (Note: 15 minutes of free-flowing fresh water)
- ☐ Other: _____

Emergency Procedures:

- The SSHO (or alternate) should be immediately notified via the on-site communication system. The HSO assumes control of the emergency response.
- The SSHO notifies the Project Manager and client contact of the emergency.

- If the emergency involves an injury to a Wood employee, the HSE Coordinator or Site Manager are to implement the Wood Early Injury Case Management program. See procedures and Flow Diagram below:
- If applicable, the SSHO shall notify off-site emergency responders (e.g. fire department, hospital, police department, etc.) and shall inform the response team as to the nature and location of the emergency on-site.
- If applicable, the SSHO evacuates the site. Site workers should move to the predetermined evacuation point (See Site Map).
- For small fires, flames should be extinguished using the fire extinguisher but only if trained within the past year. Use the **PASS** method (**P**ull the pin, **A**im at the base of the fire, **S**queeze the trigger, use a **S**weeping motion to put out the fire) when extinguishing fires. Large fires should be handled by the local fire department.
- In an unknown situation or if responding to toxic gas emergencies, appropriate PPE (e.g., level C or B PPE - if available), should be donned. If appropriate PPE is unavailable, site workers should evacuate and call in emergency personnel.
- For chemical spills, follow the job specific AHA and SDS for spill containment and spill handling procedures.
- If chemicals are accidentally spilled or splashed into eyes or on skin, use eyewash bottle/station for the eyes and wash affected area. Site worker should shower as soon as possible after incident.
- If the emergency involves toxic gases, workers will back off and reassess. Prior to re-entering the work zone, the area must be determined to be safe, that the required PPE and air monitoring equipment is available. Entry is prohibited if PPE or air monitoring equipment is inadequate.
- An injured worker shall be decontaminated appropriately.
- Within 24 hours after any emergency response, the initial Incident Analysis Report shall be completed and submitted to the Group Sr. HSE Manager. If the injury involves vehicles or overhead/underground utilities, also complete the Vehicle Incident Report (VIR) and Ground Disturbance Report (GDR), respectively. When the use of drugs or alcohol cannot be ruled out as a factor in the incident, contact P&O to determine if post accident drug testing is required.

Wood E&IS Early Injury Case Management Program

NON-EMERGENCY INCIDENT	EMERGENCY INCIDENT
Steps 1 & 2 must be completed before seeking medical attention other than local first aid. 1. Provide first-aid as necessary. Report the situation to your immediate supervisor AND HSE coordinator (all incidents with the apparent starting event should be reported within 1 hour of occurrence). 2. Injured employee:	1. Provide emergency first aid. Supervisor on duty must immediately call 911 or local emergency number; no employee may respond to outside queries without prior authorization. Any outside media calls concerning this incident must be referred immediately to Lauren Gallagher at 602-757-3211. 2. Once medical attention is sought and provided, the supervisor must:
Call WorkCare 24/7 Hotline* (888) II-XPRTS or (888) 449-7787	

WorkCare will assess the situation and determine whether the incident requires further medical attention. During this process, WorkCare will perform the following: • Explain the process to the caller. • Determine the nature of the concern. • Provide appropriate medical advice to the caller. • Determine appropriate path forward with the caller. • Maintain appropriate medical confidentiality. • Help caller to execute path forward, including referral to the appropriate local medical facility. • Send an email notification to the Corporate HSE Department.	WorkCare will be responsible for performing the following: • Contact the treating physician. • Request copies of all medical records from clinic. • Send an email update to the Corporate HSE Department.
3. IMMEDIATELY after contacting WorkCare send a brief email notification AND inform verbally (direct contact is required) ONE of HSE corporate representatives See Figure 11.3. 4. Make all other local notifications and client notifications. 5. Local Supervisor, HSE Coordinator, SSHO and any applicable safety committees to complete preliminary investigation, along with the initial Incident Report within 24 hours. 6. Corporate Loss Prevention Manager to complete Worker's Compensation Insurance notifications as needed. 7. Corporate HSE to conduct further incident notifications, investigation, include in statistics, classify, and develop lessons learned materials. * - NOTE: Step 2 is only applicable to the North-American operations and to incidents involving WOOD personnel. High potential near misses, subcontractors' incidents, regulatory inspections, spills and property damages above \$1,000 should be reported immediately, following directions from Step 3.	

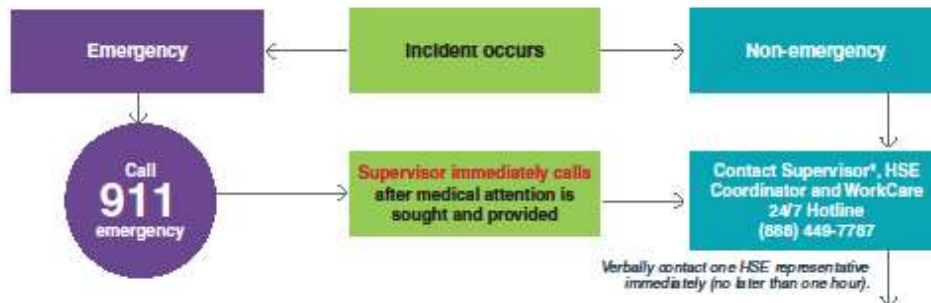
Site Specific Emergency Procedures are as follows:

INCIDENT FLOW CHART



Incident flow chart

Call immediately



E&IS Corporate HSE department contact list

Name/email	Office location	Contact information
Bruce Voss bruce.voss@woodplc.com	Cathedral City, CA	760.202.3737 (office) 951.897.6381 (cell)
Chad Barnes chad.barnes@woodplc.com	Phoenix, AZ	602.733.6000 (office) 480.495.9846 (cell)
Cindy Sundquist cynthia.sundquist@woodplc.com	Portland, ME	207.828.3309 (office) 207.650.7593 (cell) 207.892.4402 (home)
Gabe Sandholm gabe.sandholm@woodplc.com	Minneapolis, MN	612.252.3785 (office) 206.683.9190 (cell)
Lori Dowling lori.dowling@woodplc.com	Prince George, BC	250.564.3243 (office)
Philip Neville philip.neville@woodplc.com	Thorold, ON	905.687.6616 (office) 905.380.4465 (cell)
Tim Kihn tim.kihn@woodplc.com	Edmonton, AB	780.944.6363 (office) 780.717.5058 (cell)
Vladimir Ivensky (can call 24/7) vladimir.ivenky@woodplc.com	Plymouth Meeting, PA	610.877.6144 (office) 484.919.5175 (cell) 215.947.0393 (home)
Kirby Lastinger kirby.lastinger@woodplc.com	Lakeland, FL	836-667-2345 x207 (office) 863-272-4775 (cell)
Stephen Paxton stephen.paxton@woodplc.com	Kennesaw, GA	770-499-6842 (office) 678-270-0980 (mobile)
Chris Miele christopher.miele@woodplc.com	Capital Projects - Kirkland, WA	425-368-0946 (office) 425-864-9011 (mobile)

High potential near misses, workplace violence/harassment and security incidents, subcontractor incidents, regulatory inspections, spills, and property damage should be reported immediately to one of the above HSE Representatives.

*Supervisor Responsible For:

- D&A Testing Coordination as per client and Wood E&IS requirements, Local/Client Notifications, and Completing Initial IAR within 24 hours and forwarding to Corporate HSE.



Field Team Review:

I acknowledge that I understand the requirements of this HASP, and agree to abide by the procedures and limitations specified herein. I also acknowledge that I have been given an opportunity to have my questions regarding the HASP and its requirements answered prior to performing field activities. Health and safety training and medical surveillance requirements applicable to my field activities at this site are current and will not expire during on-site activities.

Name: _____	Date: _____
Name: _____	Date: _____
Name: _____	Date: _____
Name: _____	Date: _____
Name: _____	Date: _____

Routes to Emergency Medical Facilities:

HOSPITAL (for immediate emergency treatment):

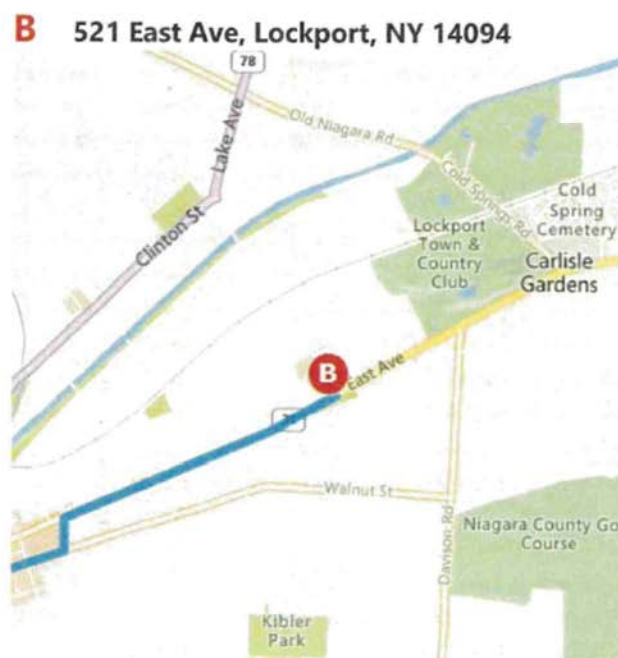
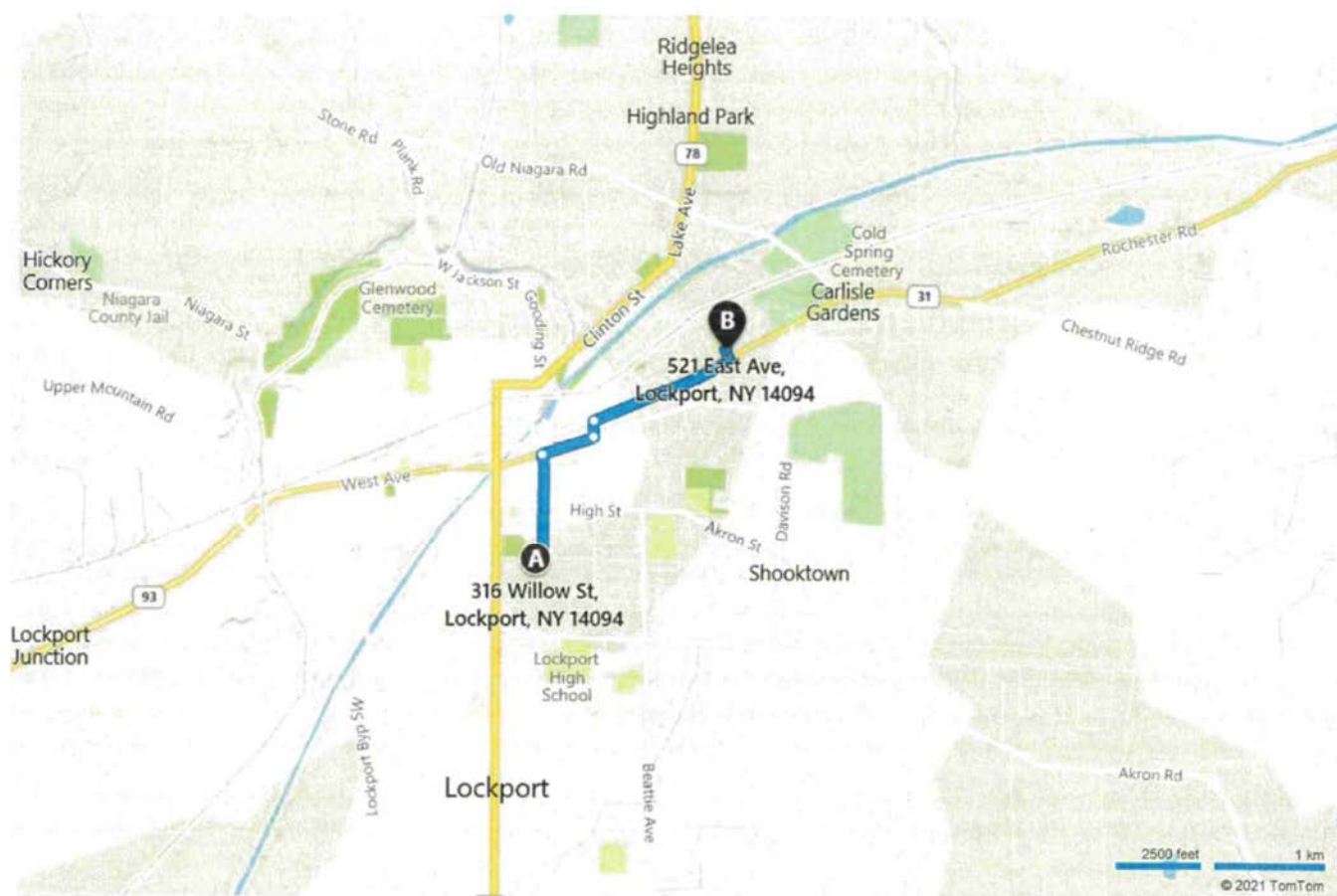
Facility
Address
Telephone

A 316 Willow St, Lockport, NY 14094

↑	1. Head east on Willow St toward Pine St	223 ft
↩	2. Turn left onto Pine St	0.6 mi
↪	3. Turn right onto NY-31 / Walnut St	0.3 mi
↩	4. Turn left to stay on NY-31 / Washburn St Krispy Krunchy Chicken on the corner	482 ft
↪	5. Turn right to stay on NY-31 / East Ave	0.8 mi
↩	6. Turn left	351 ft
↪	7. Turn right	59 ft
	8. Arrive	

B 521 East Ave, Lockport, NY 14094

Wood Environment & Infrastructure Solutions Short Form HASP



Wood Environment & Infrastructure Solutions

Short Form HASP



HOSPITAL (for immediate emergency treatment):

Facility Name: DeGraff Memorial Hospital

Address: 445 Tremont Street, Tonawanda, NY 14120

Telephone Number: 716-694-4500

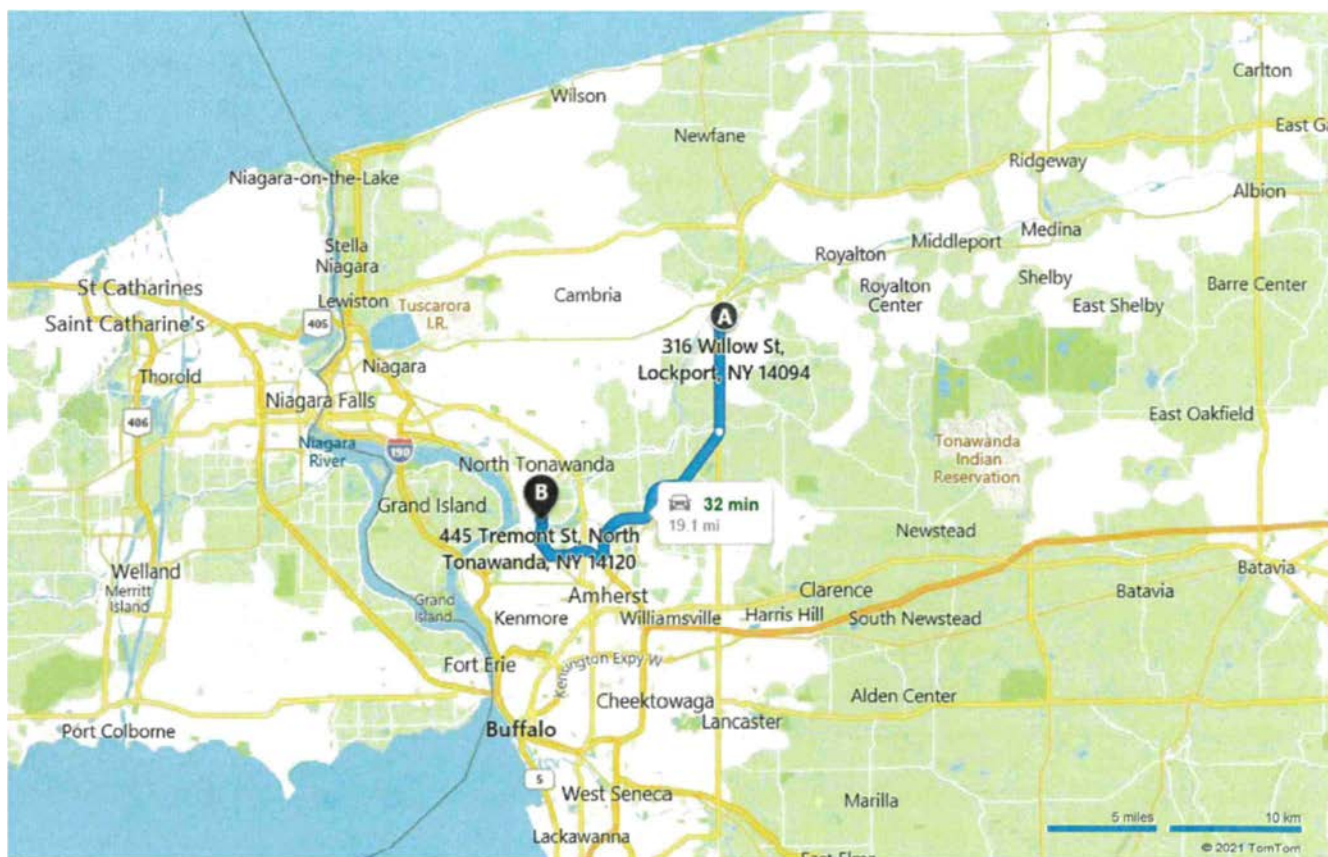
DIRECTIONS TO SECONDARY HOSPITAL (see attached map):

A 316 Willow St, Lockport, NY 14094

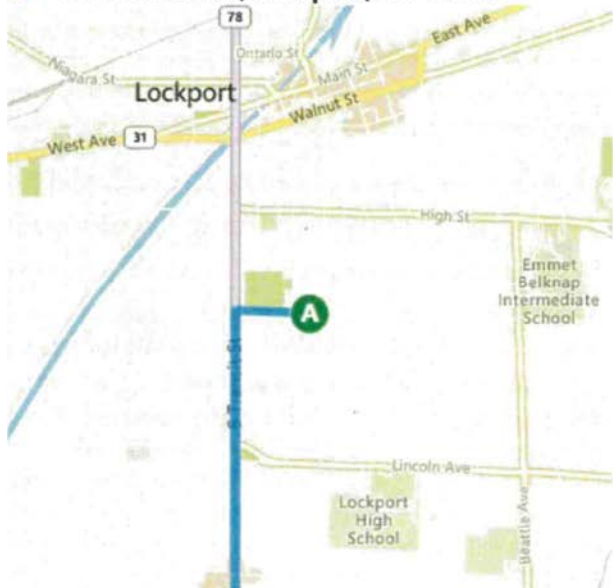
↑	1. Head west on Willow St toward Cottage St	0.2 mi
↶	2. Turn left onto NY-78 / S Transit St Pass Five Below in 1.4 mi ▲ Minor Congestion	5.3 mi
↗	3. Bear right onto NY-263 / Millersport Hwy ▲ Minor Congestion	3.1 mi
	4. Bear right onto I-990 S / Lockport Expy S	5.7 mi
	5. Take ramp right and follow signs for I-290 West	2.4 mi
↗	6. At exit 2 , take ramp right for NY-425 toward Colvin Blvd	0.3 mi
↗	7. Turn right onto NY-425 / Twin Cities Vietnam Veterans Memorial Hwy	2.0 mi
↶	8. Turn left onto Tremont St	285 ft
↶	9. Turn left	472 ft
↗	10. Turn right	151 ft
	11. Arrive The last intersection is Tremont St	

B 445 Tremont St, North Tonawanda, NY 14120

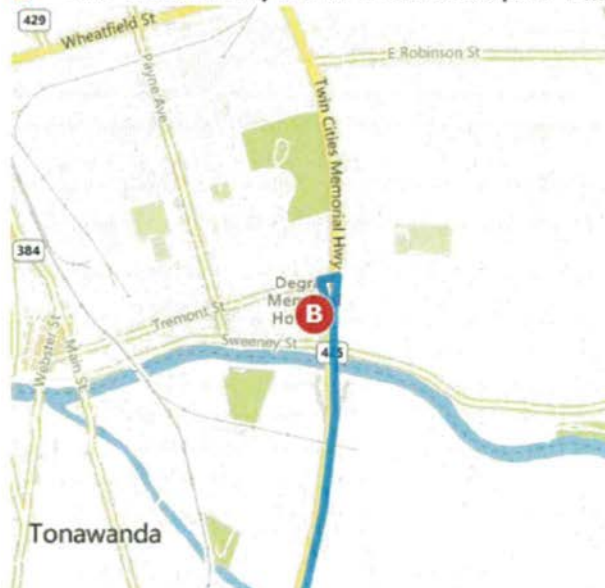




A 316 Willow St, Lockport, NY 14094



B 445 Tremont St, North Tonawanda, NY 14120



Wood HSSE Management System “Blue Book:”

The Wood HSSE management system is defined by the HSSE Management System Standard –the Blue Book. It consists of fifteen elements that set mandatory minimum standards for the management of HSSE across Wood. These minimum standards define how Wood leads, plans and organizes itself to ensure HSSE risks are controlled and to deliver continuous improvement in HSSE performance. The Blue Book is supported by Wood HSSE standards, procedures, guidelines and tools which provide further direction and advice on how to comply with the Blue Book's requirements.

Wood's core **Vision** is to:

Inspire with ingenuity, partner with agility, create new possibilities...

The Wood **Values** are:

- **Care** -Working safely, with integrity, respecting and valuing each other and our communities
- **Commitment** - Consistently delivering to all our stakeholders
- **Courage** - Pushing the boundaries to create smarter, more sustainable solutions

The Wood HSSE management system helps translate our Vision and Values into action by:

- Providing structure and consistency in the way we manage HSSE
- Focusing our attention on risk management, ensuring compliance and undertaking assurance activities
- Supporting the development of a positive HSSE culture which in turn supports the management system
- Providing a framework for continuous improvement

Refer to the Wood “Blue Book” for additional information ([LINK](#)).

Wood E&IS HSE Management System Manual and California IIPP):

The Wood E&IS Health, Safety, Security and Environment (HSSE) Management System Manual and California Injury and Illness Prevention Plan (IIPP) describes the HSSE system and tools developed & implemented at Wood E&IS. The manual addresses HSSE requirements for offices, laboratories and projects, including those of various duration, scale, location, and jurisdiction.

Wood E&IS's Safety philosophy as it pertains to all work conducted whether in the office, laboratory or in the field is:

- All incidents and injuries can be prevented.
- Management and staff are responsible for preventing injuries and occupational illnesses.
- Occupational safety and health are part of every employee's total job performance.
- Working safely is a condition of employment.
- All workplace hazards can be safeguarded.
- Training employees to work safely is essential and is the responsibility of management/supervision.
- Prevention of personal injuries and incidents and protection of environment is good business.

These principles tie into the Wood plc Health, Safety, Security and Environment (HSSE) Policy Statement:

Our HSSE Policy

wood.

At Wood, we care for our people and the environment. We ensure that our people have a safe, healthy and secure workplace; this is a fundamental right. This policy explains how we provide this.

We will:

- Care for our people.
- Identify and manage hazards to eliminate or mitigate resultant risks.
- Prevent injury, ill-health, pollution and loss resulting from our activities.
- Be responsible in our approach to protecting the environment and minimising our impacts.
- Deliver continual improvement in our health, safety, security and environmental performance.



Name Robin Watson
Position Chief Executive
Date 01 January 2019

We do this by:

- Ensuring we have exemplary HSSE leadership and management.
- Having effective, efficient and applied HSSE management systems.
- Understanding and complying with all legal, industry and other external requirements.
- Establishing and attaining clear HSSE objectives.
- Learning lessons from our incidents and preventing reoccurrence.
- Engaging with our people on HSSE issues.
- Working with our customers, regulators and others to promote continuous improvement.
- Training our people to be competent and safe in undertaking their roles.
- Helping our supply chain and partners to meet our own policy obligations.
- Promoting a positive HSSE culture that drives HSSEA improvement.
- Encouraging anyone to stop a job if they perceive any HSSE shortfall.

We commit ourselves to this Policy.

We will review annually, or where significant changes impact our business.

Policy No: HSE-POL-100001
Revision: 2
Date: 01 January 2019

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Check Wood Management System for the current version.



Wood Environment & Infrastructure Solutions

Short Form HASP



Wood Safety Shield:

A metaphor for protection - pulls together our HSSE processes and procedures to drive a simplistic and consistent message to our workforce around HSSE.

Aligned with our values, the three elements of the shield are:

- Prepare: It takes commitment to prepare.
- Engage: It takes care to engage.
- Intervene: It takes courage to intervene.

The Safety Shield seeks to educate, inform, monitor, improve and recognize our employees.



wood.
Safety Shield
Prepare. Engage. Intervene.

Six Safety Essentials:

The [Six Safety Essentials](#) are designed to support the safe execution of work in all our operating locations with the development of a “common set of behaviors” that we can all share. Wood, in our goal to be recognized as a world-class leader in HSSE safety must strive to ensure our daily overall consistency of HSE standards, leadership and performance.

When performing work at the site, the Wood **Six Safety Essentials** will be followed:

- Always Take Care
- Follow the Rules
- Do a Risk Assessment
- You Must Intervene
- Manage Any Change
- Wear the Correct PPE



Wood Nine Life Saving Rules:

The [Life Saving Rules](#) are Wood’s minimum standard - it is an expectation that everyone must comply with the rules. Everyone needs to understand that:

- You must comply with the Life Saving Rules because non-compliance could result in serious injury or fatality to you or your colleagues
- If you breach a Life Saving Rule you may be subject to disciplinary action.

Supervisors and Managers must understand that:

- Breaking the Life Saving Rules will not be tolerated - no matter how urgent or important a task is.



- You have a duty to ensure that people undertaking a task have the right instruction, equipment and training to comply with the Life Saving Rules.



Bypassing Safety Controls



Confined Space



Driving



Energy Isolations



Hot Work



Line of Fire



Safe Mechanical Lifting



Work Authorization



Working at Height

Stand Up for Safety:

Wood's Stand up for Safety initiative focuses on four hazards that were identified by analyzing Wood's HSE incidents and High Potential events. These are four areas of primary concern and are hazards that Wood employees face collectively as a global business. These four hazardous areas are:

- Dropped objects
- Driving
- Working at Height
- Process Safety

Extra attention will be paid to these four key areas if applicable when working on the project site.

Wood Environment & Infrastructure Solutions

Short Form HASP



HEART:



HEART is the corporate observation reporting system that all Wood employees are to use to report safety or environmental observations.

To enter a HEART observation, use the following link: <https://cfapps.Woodfw.com/HEART/>

HEART is also accessible from mobile devices. [Click here](#) for instructions on how to access HEART from a mobile device.

A manual HEART observation form can be accessed from [here](#).

☐ Unsafe Act ☐ Unsafe Condition
☐ Safe Behaviour ☐ Safe Condition

☐ Wood ☐ Sub-contractor ☐ Client ☐ Third Party

Observer name	Observer email
Observation date	Observation time
Business Unit	Business Group
Project/Office	Site/Office name
Exact location of observation	
If Safe Behaviour state name of individual or team	

Details of safety observation

Immediate action taken/recommended

Category Select one

Work environment	Integrity management
Fire & fire protection	Accountability
Furniture & work equipment	Management of change
Housekeeping	Competence
Lighting & noise	Emergency response
Office security	Hazard evaluation & risk management
Traffic routes & parking areas	Incident investigation & management
Temperature & ventilation	Protective systems
Job factors	Procedures & instructions
Safety critical communications	Adequate / Inadequate
Fatigue / Workload	Implemented / Not implemented
Management of change	Followed / Not followed
Training & competence	Understood / Not understood
Contractor site safety	Travel & safety away from workplace
Barrier / Segregation	Electricity
Safety awareness & behaviour	Tools & equipment
Procedure implementation	Falls & slips
Safety induction & briefings	Fire safety
Housekeeping	Manual handling
Safety planning	Personal security
Personal Protective Equipment (PPE)	Sport & leisure
Signage & instructions	Transportation
Environment	Tools & equipment
Energy usage	Safe / Unsafe condition
Waste & recycling	Correct / Incorrect use
Water usage	Correct / Incorrect tool for the job

HEART conversation 5 step process

- Prepare
- Observe
- Initiate - Introduce yourself, Praise good behaviour, Listen, Ask open questions
- Agree and commit
- Record and close out

Typical questions

- How can you and your workmates get hurt?
- What type of accident may happen?
- How can you and others avoid getting hurt?
- What if something unexpected happens?
- What have you done to prevent you and your colleagues getting hurt?
- How and when was the pre-job safety discussion (toolbox talk) conducted?
- What are the job specifics/team composition changes that occurred since you started?
- How has the work environment changed since you started?
- How can this job be done more safely?

Form No: HSE-FOR-100705
Rev/Date: 0 17 January 2019

☐ Do you require feedback?



Tailgate Safety Meeting Form



Check One:

☐ Initial Kickoff Safety Meeting ☐ Regular/Daily Tailgate Safety Meeting ☐ Unscheduled Tailgate Safety Meeting

Date: _____ Site: _____

Site Manager: _____ Site Health and Safety Officer: _____
Print *Print*

Planned Activities: _____

Order of Business

Topics Discussed (Check all that apply)

- | | |
|--|---|
| ☐ Scope of Work | ☐ Decontamination Procedures for Personnel and Equipment |
| ☐ Site History/Site Layout | ☐ Physical Hazards and Controls (e.g., overhead utility lines) |
| ☐ Personnel Responsibilities | ☐ Anticipated Weather (snow, high winds, rain) |
| ☐ Training Requirements | ☐ Temperature Extremes (heat or cold stress symptoms and controls) |
| ☐ Hazard Analysis of Work Tasks (chemical, physical, biological and energy health hazard effects) | ☐ Biological Hazards and Controls (e.g., poison ivy, spiders) |
| ☐ Applicable SOPs (e.g., Hearing Conservation Program, Safe Driving, etc.) | ☐ Site Control (visitor access, buddy system, work zones, security, communications) |
| ☐ Safe Work Practices | ☐ Sanitation and Illumination |
| ☐ Engineering Controls | ☐ Logs, Reports, Recordkeeping |
| ☐ Chemical Hazards and Controls | ☐ Incident Reporting Procedures |
| ☐ Signs and symptoms of over exposure to site chemicals | ☐ Near Misses/Hazard ID including worker suggestions to correct and work practices to avoid similar occurrences |
| ☐ Medical Surveillance Requirements | ☐ General Emergency Procedures (e.g., locations of air horns and what 1 or 2 blasts indicate) |
| ☐ Action Levels | ☐ General Emergency Response Procedures (e.g., earthquake response, typhoon response, etc.) |
| ☐ Monitoring Instruments and Personal Monitoring | ☐ Medical Emergency Procedures (e.g., exposure control precautions, location of first aid kits, etc.) |
| ☐ Perimeter Monitoring, Type and Frequency | ☐ Route to Hospital and Medical Care Provider Visit Guidelines |
| ☐ PPE Required/PPE Used | ☐ Site/Regional Emergency Response Procedures (e.g., exposure control precautions, location of first aid kits, etc.) |
| ☐ Define PPE Levels, Donning, Doffing Procedures | ☐ Hazardous Materials Spill Procedures |

PPE required for the tasks to be conducted: _____

Required Permits: _____

Site Access or other issues: _____

Tailgate Safety Meeting Form



Safety Suggestions by Site Workers: _____

Action Taken on Previous Suggestions: _____

Injuries/Incidents/Personnel Changes since last meeting: _____

Observations of unsafe work practices/conditions that have developed since previous meeting: _____

Location of (or changes in the locations of) evacuation routes/safe refuge areas: _____

Additional Comments: _____

Attendee signatures below indicate acknowledgment of the information and willingness to abide by the procedures discussed during this safety meeting

Name (Print)	Company	Signature
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Meeting Conducted by: _____ Title: _____
Print

Signature: _____ Time: _____
Print

When selecting the appropriate PPE for the job, consider the following:

- **Safety glasses** – general eye protection – source of hazard, typically coming from straight on, required at most sites
- **Tinted Safety Glasses** – same as above, but when working in direct sunlight. May need two both tinted and untinted if working in both sunlight and shade/overcast skies.
- **Safety goggles** – needed for splash hazard, more severe eye exposures coming from all directions. Non-vented or indirect venting for chemical splash, non-vented for hazardous gases or very fine dust, vented for larger particulates coming from all directions.
- **Face shield** – needed to protect face from cuts, burns, chemicals (corrosives or chemicals with skin notation), etc.
- **Safety boots** – needed if danger of items being dropped on foot that could injure foot
- **Hard hat** – danger from items falling on head or bumping head against objects – any overhead work, tools, equipment, etc. that is above the head and could fall on head if item fails, or falls off work platform. Any work around low hanging equipment or structures. Typically required at most sites as a general PPE
- **Thin, chemical protective inner gloves** (e.g., thin Nitrile, PVC – do not use latex – many people are allergic to latex) – needed to protect hands from incidental contact with low risk contamination at very low concentrations (ppb or low ppm concentrations in groundwater or soil) or used in combination with outer gloves as a last defense against contamination. Need to specify type
- **Outer gloves** – thicker gloves (e.g., Nitrile, Butyl, Viton, etc.) – used when potential for high concentrations of contaminants (e.g., floating product, percent ranges of contaminant, opening drums, handling pure undiluted chemicals, etc.). Need to specify type.
- **Leather gloves, leather palm, cotton** – good in protecting hands against cuts – no protection from chemicals. May be used in combination with chemical protective gloves.
- **Boot Covers** – when there is contamination in surface soils or working surface in general. When safety boots need protection from contact with contaminants.
- **White (uncoated) Tyveks** – protect clothing from getting dirty, good for protection against solid, non-volatile chemicals (e.g., asbestos, metals) – no chemical protection.
- **Polycoated Tyveks** – least protective of chemical protective clothing. Used when some risk of contamination getting on skin or clothing. Usually, lower ppm ranges of contaminants.
- **Saranex** – Greater protection against contamination than Polycoated Tyveks. Used to protect against PCBs or higher concentrations of contaminants in the soil or groundwater.
- **Other Chemical protective clothing** – if significant risk of dermal exposure, contact H&S to determine best kind.
- **Long sleeved shirts, long pants** – if working in areas with poison ivy/oak/sumac, poisonous insects, etc. and no chemicals exposure. May want to use uncoated Tyveks for work in areas where poisonous plants are known to be to protect clothing.
- **Cartridge Respirator (Level C PPE)** – Need to calculate change schedule (contact Division EH&S Manager for this) to determine length of use. To be able to use cartridge respirators, need to know contaminants, estimate levels to be encountered in the breathing zone, need to ensure that cartridge will be effective against COCs, and need to be able to monitor for COCs using PID, FID, Dräger tubes, etc.. If can't do any of these, then Level B PPE is probably going to be needed.
- **High Visibility Vest** – needed for any road work (within 15 feet of a road) or when working on a site with vehicular traffic or working around heavy equipment. Needed if work tasks would take employee concentration away from movement of vehicles and workers would have to rely on the other driver's ability to see the employee in order not to hit them. This includes heavy equipment as well as cars and trucks, on public roads or the jobsite. Not needed if wearing Polycoated Tyveks – as they are already high visibility.
- **Reflective Vest** – see above, but for use at night.
- **Hearing Protection** – needed if working at noise levels above 85 dBA on a time weighted average. If noise measurements are not available, use around noisy equipment, or in general, if you have to raise your voice to be heard when talking to someone standing two feet away.
- **Protective Chaps** – required when using a machete or chain saw or any other cut hazard to legs.