From: Camila Israel <cIsrael@psands.com>
Sent: Wednesday, November 27, 2019 4:38 PM
To: Spellman, John (DEC)
Subject: File Transfer: Chappaqua Site BCP 360120 FINAL FER - Chappaqua Station
Attachments: Transmittal - 00007.pdf

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Project Name: Chappaqua Station
Project Number: 047360002

From: Camila Israel (PS&S)
To: John Spellman
CC: Linda Shaw (Knauf Shaw, LLP); Laura Grose (PS&S); Janos M. Szeman (PS&S); Dwight Kanyuck (Knauf Shaw, LLP); Brian Donato (Conifer Realty LLC); david.herman@dec.ny.gov; L. Miguel Salinas (PS&S); Nate Scheffinger (LeChase); pmarfione@coniferllc.com; Jeff.Andersen@lechase.com (LeChase); Thomas.Amato@conifer-lechase.com; Collin Boylan (PS&S); Sarah Levine (PS&S); Aaron Wong (PS&S)
Subject: Chappaqua Site BCP 360120 FINAL FER
Purpose: For your use
Sent via: Info Exchange
Expiration Date: 12/27/2019
Remarks: Good afternoon John,

On behalf of Chappaqua Station LLC (CS), Paulus, Sokolowski and Sartor Engineering, PC (PS&S) prepared the attached Final Engineering Report, for the Former Chappaqua Coal/Fuel and Humble Oil Site (BCP Site No. C360120), for your review and approval.

This FER contains updated figures, tables and appendices. Note that record of construction drawings were signed and stamped by surveyor and remedial engineer Janos Szeman, P.E. Also, as you requested, this FER documents the collection of baseline groundwater samples and emerging contaminants samples.

Final SMP will be submitted to you next week. Please call/email me or Janos with any questions or comments.

Happy Thanksgiving!

Camila

Transferred Files

NAME	TYPE	DATE	TIME	SIZE
FER_Chappaqua_C360120 FINAL FER_2019-11-22.pdf	PDF File	11/27/2019	3:51 PM	509,898 KB

CHAPPAQUA COAL/FUEL AND

HUMBLE OIL SITE

WESTCHESTER COUNTY

TOWN OF NEW CASTLE

(HAMLET OF CHAPPAQUA), NEW YORK 10514

Final Engineering Report

NYSDEC Site Number: C360120

Prepared for:

CHAPPAQUA STATION, LLC
183 EAST MAIN STREET, SUITE 600
ROCHESTER, NEW YORK 14604

Prepared by:

PAULUS, SOKOLOWSKI AND SARTOR ENGINEERING, PC
ONE LARKIN PLAZA, SECOND FLOOR
YONKERS, NEW YORK 10701

NOVEMBER 22, 2019

CERTIFICATIONS

I, Janos M. Szeman, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Remedial Action Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial Action Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Remedial Action Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by the Department.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

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, Janos M. Szeman, of Paulus, Sokolowski and Sartor Engineering, PC (67B Mountain Boulevard Extension, Warren, NJ 07059), am certifying as Owner's Designated Site Representative and I have been authorized and designated by the site owner to sign this certification for the site.

	22 November 2019	
NYS Professional Engineer # 084542-1	Date	Signature

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LIST OF ACRONYMS

Table 1.0

Acronym	Definition
AS	Air Sparging
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan
C/D	Construction and Demolition
CFR	Code of Federal Regulation
CLC	Conifer-Le Chase Construction, LLC
CLP	Contract Laboratory Program
COC	Certificate of Completion
CO2	Carbon Dioxide
CP	Commissioner Policy
CS	Chappaqua Station, LLC
DER	Division of Environmental Remediation
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
FER	Final Engineering Report
GHG	Green House Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IC	Institutional Control
mph	Miles Per Hour
MPR	Monthly Progress Report
NRC	NRC Corporation
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan

RAWPA	Remedial Action Work Plan Addendum
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Remedial Party
RSO	Remedial System Optimization
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
SWPPP	Stormwater Pollution Prevention Plan
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program

FINAL ENGINEERING REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

Chappaqua Station, LLC (CS) entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) in February 24, 2012, to investigate and remediate an approximately 0.34-acre property located in the Hamlet of Chappaqua, Westchester County, New York (the "Site"). The property was remediated to restricted residential use and will be used for residential housing and commercial units.

The Site is in the County of Westchester, New York and is identified as Section 100.11, Block 1, Lot 5 on the Hamlet of Chappaqua Tax Map # 100.11. The site is situated on an approximately 0.34-acre area bounded by Hunts Place to the north, New York State Route 120 (NY 120) to the south, an active Metro North railway to the east, and a northbound off-ramp for the Saw Mill River Parkway to the west (refer to **Figure 1**). The boundaries of the site are fully described in **Appendix B**: Survey Map, Metes and Bounds.

An electronic copy of this FER with the required supporting documentation is included as **Appendix C.**

2.0 SUMMARY OF SITE REMEDY

2.1 REMEDIAL ACTION OBJECTIVES

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) were identified for this site.

2.1.1 Groundwater RAOs

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Restore groundwater aquifer, to the extent practicable, to pre- disposal / prerelease conditions.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

2.1.2 Soil RAOs

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

2.1.3 Soil Vapor RAOs

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

2.2 DESCRIPTION OF SELECTED REMEDY

The Site was remediated in accordance with the remedy selected by the NYSDEC in the Remedial Action Workplan (RAWP) dated December 2013, and the RAWP Addendum (RAWPA), dated April 10, 2017.

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy:

1. Excavation and off-site disposal of contaminant source areas, including:

    - Grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u), including soil containing LNAPL to a depth of ten feet to the extent feasible without disturbing or destabilizing critical infrastructure;
    - Soils that create a nuisance condition such as odor, as defined in Commissioner Policy CP-51 Section G, to the top of the groundwater table to the extent practicable; and
    - Removal of one (1) identified underground storage tank (UST) pressure vessel.

2. Installation of a NAPL recovery system consisting of three NAPL recovery wells with the objective of collecting any residual LNAPL that remains following the soil removal.

3. Construction and maintenance of a Site wide cover system consisting of a demarcation layer and 12-inch-thick building slab and then an interim 24-inch-thick soil cover system, for those area beyond the slab foundation, to prevent human exposure to below grade, remaining contaminated soil/fill remaining at the site. The interim soil cover system will eventually be replaced with a permanent soil cover system along the eastern property boundary and an asphalt pavement cover system along the northern property boundary in 2020. The 2020 interim to permanent cover system construction activities will be performed in accordance with the Site Management Plan (SMP) and the construction activities will be presented in the SMP required Periodic Review Report (PRR);

4. Installation of a passive Vapor Management System (VMS) to mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into the on-Site building. The SMP includes provisions for 1) evaluating the potential of vapor intrusion and 2) monitoring for vapor intrusion for any buildings developed on the site.

5. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the site.

6. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;

7. Periodic certification of the institutional and engineering controls listed above.

3.0 INTERIM REMEDIAL MEASURES, OPERABLE UNITS AND REMEDIAL CONTRACTS

The remedy for this site was performed as a single project, and no interim remedial measures, operable units or separate construction contracts were performed.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the Site were conducted in accordance with the Remedial Action Workplan (RAWP) dated December 2013, and the revised RAWP Addendum (RAWPA), dated April 10, 2017. Deviations from the RAWPA were presented to NYSDEC in a form of Field Change Requests (FCR). FCR are noted in Section 4.10. Copy of the FCR and NYSDEC approvals are presented in **Appendix E**.

4.1 GOVERNING DOCUMENTS

4.1.1 Site Specific Health & Safety Plan (HASP)

All remedial work performed under this Remedial Action (RA) was in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

The PS&S Site-Specific Health and Safety Plan (HASP) was complied with for the 2017 through 2019 remedial and invasive work performed at the Site and included the following:

- Roles and responsibilities of project team members;
- A history of the Site and a description of the Site activities;
- A discussion of the potential chemical, biological and physical hazards at the Site;
- Activity Hazard Analyses for the various work tasks;
- A discussion of the requirements and use of PPE;
- Air monitoring requirements;
- Establishment of work zones;
- Medical surveillance procedures and protocols;
- An Emergency Response Plan; and
- Requirements for record keeping and tracking.

The HASP was included in Appendix D of the approved 2017 RAWPA. During the active 2017 through 2019 operations, CS's remediation contractor, National Response Corporation (NRC), operated under their Site-Specific HASP that was provided to the NYSDEC during the 2017 project kick-off submittals (refer to Appendix Q. 1).

4.1.2 Construction Quality Assurance Project Plan (QAPP)

The QAPP was included as Appendix C of the 2017 RAWPA approved by the NYSDEC. The QAPP describes the specific policies, objectives, organization, functional activities and quality assurance/ quality control activities designed to achieve the project data quality objectives and the observe and document the remedial construction that was completed in conformance with the remediation objectives and specifications.

The QAPP included details about:

- The organization for the performance of the field activities and the responsibilities of the personnel performing the work;
- QA/QC objectives to confirm the integrity of data;
- Procedures for collecting, handing and tracking the environmental quality samples;
- Quality Audits;
- Preventive measure procedures to confirm the integrity of the data; and,
- Corrective action procedures.

A copy of the QAPP was included in Appendix C of the approved 2017 RAWPA.

4.1.3 Materials Management Plan (MMP)

A Soil/Materials Management Plan (S/MMP) was developed by NRC, the CS remediation contractor, and described the procedures for the characterization, excavation, management, transportation and disposal of material excavated. The S/MMP was developed in accordance with the 2017 RAWPA. The S/MMP included waste characterization procedures, procedures for handling stockpiles, air monitoring requirements, dust and odor suppression methods. The S/MMP is included in **Appendix Q. 2**. In addition, NRC Sampling Plan described procedures for sampling of impacted soils, treated groundwater and imported materials. This Sampling Plan is included in **Appendix Q. 3.**

Overall, the handling of waste materials included:

Soils

Soil excavated from the Site were classified and transported off Site as non-hazardous materials. During remediation, soils were stockpiled or live-loaded into trucks for further off Site disposal. Stockpiles were continuously encircled with a berm and/or silt fence at the toe of the slope to prevent runoff from being generated from the stockpiles. Contaminated soil stockpiles were kept covered with appropriately anchored tarps. Soil was transported off Site by licensed haulers in accordance with appropriate local, State, and Federal regulations. Trucks exiting the site were secured with tight-fitting covers.

During the 2017, 2018 and 2019 remedial action and nuisance soil excavations, no recoverable NAPL was observed on top of the Site groundwater.

Wastewater

Liquid wastes (e.g., decontamination waters) generated from dewatering activities was classified as non-hazardous waste. Groundwater was on-site treated using one 18,000-gallon weir tank, two 21,000-gallon settling tanks and subsequently discharged into the

sanitary sewer via Westchester County Department of Environmental Facilities permit #. 432-17, dated July 31, 2017.

During the 2017, 2018 and 2019 remedial action and nuisance soil excavations, no recoverable NAPL was observed on top of the Site groundwater.

Other liquids were transported off-site in bulk containers (e.g. DOT regulated tanker trucks) or DOT regulated 55-gallon drums.

4.1.5 Storm-Water Pollution Prevention Plan (SWPPP)

The erosion and sediment controls for the remedial action construction efforts were performed by the excavation contractor and confirmed by the Remedial Engineer in conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control. The Site Erosion and Sediment Control Plan, Sheet CB-7 revision 3, dated September 2, 2016 was prepared by JMC, civil engineer for the Site (refer to **Appendix Q. 4**)

JMC was responsible for the preparation and implementation of the stormwater SWPPP. JMC performed routine Site visits to confirm the SWPPP implementation. In accordance with the SWPPP, the sediment and erosion control measures (i.e. silt fence around the perimeter) were installed prior to beginning any clearing, grubbing or excavation. Exposed slopes and the Site graded areas were immediately stabilized after completion of construction or when they were not part of the immediate work area for a period of 14 days or more.

4.1.6 Community Air Monitoring Plan (CAMP)

A CAMP was prepared in accordance with Appendix 1A of DER-10. A copy of the CAMP in included in Appendix E of the 2017 RAWPA. The CAMP includes air monitoring requirements for particulates and volatile organic compounds.

The CAMP was revised in April 2017 (Revision #1) and August 2017 (Revision #2) to include a provision for odor assessments. In August 2017, daily odor assessments were implemented during RA implementation.

The following paragraphs detail the CAMP protocols followed for both VOCs and particulates:

- For the remedial action excavation and backfill activities four on-Site CAMP Stations (N74, N81, S77 and S79) and two off-site CAMP Stations (The “North” CAMP Station placed on private property (9 Hunts Lane) and the “East” CAMP Station on public property (Town of New Castle Public Parking Lot) were operated daily to monitor upwind and downwind conditions.
- For the non-remedial action excavation Site intrusive activities such as pile driving efforts, four on-Site CAMP Stations and only one off-site CAMP Stations was operated on a daily basis during only Site intrusive activities (i.e.,

the remedial action and nuisance soil excavations). The one off-Site CAMP Station location was positioned daily at the downgradient wind direction.

- Supplemental monitoring was performed around the exterior of the remedial activities with a handheld PID monitor to measure TVOC. Supplemental walk-around monitoring was completed when Site conditions reach the Low Action Level.
- The action levels and response measures for VOC monitoring utilized during the remediation are provided below:
  - Low Action Limit, if the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeded 5 parts per million (ppm) above background for the 15-minute average or was above 5ppm within 20 feet downwind of Exclusion Zone, work activities were to be temporarily halted and monitoring continued. If the total organic vapor level readily decreased (per instantaneous readings) to below 5 ppm over background within 200 feet downwind of the Exclusion Zone, work activities were to resume with continued monitoring.
  - If TVOC concentration was greater than or equal to the 5.0 ppm but less than the High Action Level 25.0 ppm, work activities were to be temporarily halted a more stringent analysis is put in effect to identify source of vapors, corrective actions were taken to abate emissions and continuous monitoring ensued.
  - High Action Limit is when the TVOC concentration was greater than or equal to the High Action Level of 25.0 ppm; work activities were to be temporary halted and appropriate measures will be taken to determine the best way to reduce and sustain a low concentration of TVOC in the ambient air.

- Particulate concentrations were monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring was performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment was equipped with an audible alarm or strobe light to indicate exceedance of the action level. In addition, fugitive dust migration was visually assessed by PS&S, CLC, and NRC during the 2017 through 2019 Site remedial action efforts.
  - Low Action Level: If the downwind PM-10 particulate level was 100 micrograms per cubic meter (mcg/m3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust was observed leaving the work area, then work activities were to be temporarily halted and dust suppression techniques were to be employed. Work was to continue with dust suppression techniques provided that downwind PM-10 particulate levels are below 100 mcg/m3.
  - High Action Limit, if after implementation of dust suppression techniques, downwind PM-10 particulate levels were greater than 150 mcg/m3 above

the upwind level, work was to be stopped and a re-evaluation of activities initiated. Work would resume provided that dust suppression measures and other controls were successful in reducing the downwind PM-10 particulate concentration to within 100 mcg/m3 of the upwind level and in preventing visible dust migration.

- An odor assessment program was implemented during construction and consisted of conducting odor assessment tours in three defined routes (northerly, westerly easterly routes) and responding to odor complaints reported into the project's odor complaint hot line. Odors were assessed using an odor assessment classification system and odor control measures were implemented, as needed.
- Analytical data was uploaded, in real-time, to the on-Site computer system for data reduction and analysis. The CAMP field observations, corrective actions and odor complaint logs were submitted daily to NYSDEC and the New York State Department of Health (NYSDOH). Additionally, Weekly CAMP Reports were prepared by PS&S and included in the Monthly Progress Reports submissions to NYSDEC (Appendix.

4.1.7 Community Environmental Response Plan

In 2017, a CERP was developed to outline controls, monitoring and work practices other than the CAMP to alleviate short-term impacts to the surrounding community during projected activities performed at the Site. A copy of the CERP was included in Appendix F of the 2017 RAWPA. The CERP includes:

- Soil and sediment erosion control practices;
- Storm water management and monitoring practices;
- Dust control practices; and
- Odor and organic vapor control practices.

The CERP was revised in August 2017 to address odor concerns by implementing odor suppressant techniques and performance of odor assessments during RA.

4.1.8 Contractors Site Operations Plans (SOPs)

The Remediation Engineer reviewed the required remediation plans and submittals for this remedial project (i.e. those listed above plus contractor and subcontractor submittals) and confirmed compliance with the 2017 RAWPA. The remedial documents were submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

4.1.9 Community Participation Plan

A Citizen Participation Plan (CPP) was prepared during the BCP application process.

As required by the CPP, following the approval of the RAWP and prior the commencement of the remedial action, a Fact Sheet summarizing the remedy was distributed to the site contact list via NYSDEC Fact Sheet. A hard copy of the approved CPP and the 2017 RAWP Approval (RAWPA) was placed in the project repository listed below:

Chappaqua Public Library
195 South Greeley Avenue
Chappaqua, New York 10514
Phone: (914) 238-4779 ext.: 6

NYSDEC Region 3 Headquarters
21 South Putt Corners Rd
New Paltz, NY 12561
Phone: (845) 256-3154

A Fact Sheet will be distributed to site contact list announcing NYSDEC approval of FER and issuance of Certificate of Completion (COC).

4.2 REMEDIAL PROGRAM ELEMENTS

4.2.1 Contractors and Consultants

The following list presents the contractors who performed work and their associated tasks.

The Remedial Engineer (RE) for this project under the BCA is Janos A. Szeman, P.E. The RE is a registered professional engineer (PE) licensed by the State of New York. The RE coordinated the work of other contractors and subcontractors involved in aspects of remedial construction, air monitoring, emergency spill response services, import of back fill material, and management of waste transport and disposal at the Site.

The following subcontractors completed the work under this RA:

Table 2 – Remedial Task and Subconsultants	
Contractor / Consulting Party	**Remedial Action Role**
PS&S	Remedial Engineer (Janos Szeman, NYS PE) PS&S remedial oversight and CAMP implementation, BCP reporting
Conifer- Le Chase Construction	General construction contractor for the development of the Site.
National Response Corporation (NRC)	General remediation contractor Waste management contractor
Edgeboro International, Inc.	NRC subcontractor for the installation of the vapor management system (VMS)
Parratt-Wolff, Inc.	NRC subcontractor and licensed NYSDEC driller. Installation of NAPL and groundwater monitoring wells
JMC	Civil engineer, SWPPP inspection, and licensed surveyor
Warshauer Mellusi Warshauer Architects (WMW)	Project Architect
Alpha Analytical,	NY Certified with the Environmental Laboratory Approval Program (Certification #11148). Analytical testing of soil samples

4.2.2 Site Preparation

A pre-construction meeting was held with NYSDEC and NRC, the remediation contractor, on June 2, 2017.

Prior to mobilization of equipment and personnel to the remediation area, NRC contacted Dig Safe NY for public utility mark outs.

Mobilization to the site occurred in June 2017, after the Site obtained the necessary approvals that included NYSDEC, Town of New Castle and MTA. SEQRA requirements and substantive compliance requirements for attainment of applicable natural resource or other permits were achieved during this Remedial Action. Documentation of agency approvals required by the RAWPA is included in **Appendix E.** Remediation-Related Permits are included in **Appendix F**. Other non-agency permits relating to the remediation project are provided in **Appendix G.**

Site preparation and construction mobilization activities included:

A. Commenced the installation of the temporary Site facilities (Site trailer, sanitary facilities, storage trailer), zoning establishment (support zones, stockpile management areas, exclusion zones, contaminant reduction zones), temporary fencing installation.

B. Performed the topographic Site survey and excavation area layout activities.

C. Performed a ground penetrating radar (GPR) survey of the Site to identify potential underground utility and underground storage tanks (USTs).

D. Commenced Site soil waste class characterization program (WCSP) sampling and groundwater sampling activities.

E. Commenced construction dewatering tanks and treatment mobilization, installed decontamination pads.

F. Commenced the establishment of the Site road and temporary staging areas.

G. Installation of permanent steel sheeting along the Saw Mill Parkway off-ramp and approximately 5 feet offset west of the Site, this steel sheeting was required to perform the deep remedial excavation work.

A NYSDEC-approved project sign was erected at the project entrance and remained in place during the 2017 through 2019 Remedial Action.

4.2.3 General Site Controls

General Site Controls were installed in June 2017 and have been maintained by CLC through the completion of the 2019 remedial actions.

Site access was provided by a 60-foot-long, stabilized construction entrance, located on Hunts Place. A temporary fence with locks was installed around the perimeter of the site. The project privacy fencing and signage was inspected on a weekly basis, and any deficiencies identified during the inspection were corrected prior to the next business day. Signs were posted at the primary site entrance stating that Site visitors must sign in at the Site Office, and the requirements for PPE. In addition, A NYSDEC-approved project sign was erected at the project entrance and remained in place during phases of the Remedial Action. Temporary traffic controls were installed on the site to direct the flow of inbound and outbound vehicle traffic.

Erosion and sediment controls were installed with primarily focus on the site border with the rail line, site entrance and catch basins that accept runoff storm flow from the site. The erosion control measures were inspected by JMC on a weekly basis, or after a rain fall greater than ¼ inch. Any deficiencies identified during the inspection were corrected immediately or prior to the next business day. The stockpile covers were inspected each workday to confirm there are no tears, and that the anchors are still in place

and effective. Any deficiencies identified during the inspection were corrected immediately or prior to the next business day.

A decontamination pad was constructed as per RAWPA to adequately facilitate decontamination of the contractor's largest mobile equipment and to withstand the anticipated traffic loads throughout the duration of the project. A temporary contamination reduction zones was established for decontamination of equipment and personnel. This zone included heavy plastic sheeting and a staging area provided with bermed edges. Wastewater collected from decontamination zone was containerized into drums and disposed of an off-site at the Tradebe wastewater facility in Massachusetts (refer to **Appendix L. 7**).

Silt fence and straw wattles were installed as a berm and containment around each stockpile. The stockpile covers were inspected each workday to confirm there are no tears, and that the anchors were still in place and effective. Any deficiencies identified during the inspection were corrected immediately or prior to the next business day.

Weekly meetings were held with the project team and reports documenting remedial construction activities were submitted to NYSDEC and stakeholder in a monthly basis (refer to **Appendix J**).

4.2.4 Nuisance Controls

Strong petroleum odors were anticipated since the contaminant of concern for this site included volatile organic compounds (VOCs), which can have a strong odor when handled. To prevent nuisance conditions, the initial odor controls implemented at the Site included continuous air monitoring for dust and VOC's along the site perimeter and throughout the duration of ground disturbance activities. Truck wash and egress housekeeping were maintained during the duration of the project. A decontamination pad was constructed as per the RAWPA to adequately facilitate decontamination of the contractor's largest mobile equipment and to withstand the anticipated traffic loads throughout the duration of the project.

Odor complaints were reported to NYSDEC evidencing that the initial odor control measures were not effective. Odors conditions were unacceptable to the DEC, therefore, intrusive work stopped on August 2, 2017. The work re-started once a revised CAMP was submitted to NYSDEC for approval. The revised CAMP required, among other items, modifications to the excavation task, odor suppressants to be applied continuously on observed exposed soil and as well as while soil was being placed into trucks.

The revised odor assessment program was established for the Site on August 18, 2017 as outlined in the August 2017 Revised CAMP. Odor suppressing measures were initiated when the odors from the soils reach a nuisance levels. Bio-solve was the primary odor suppression agent used at the Site. Bio-solve was deployed as a mist to the excavation sidewalls and active soils. In addition, soil stockpiles were covered with tarps or 6-mil poly

sheeting to limit the odors generated from them. Odor Assessment Reports are included as attachments to the Weekly CAMP Reports (refer to Appendix I).

An odor complaint hotline was setup for the Site construction. Construction related and unrelated odor complaints were received on the following six dates: August 8, 2017, August 21, 2017; August 24, 2017; September 14, 2017; September 26, 2017; and April 9, 2018. Information associated with each complaint (e.g., date, time, complaint type and team response) was recorded in the community odor complaints log included in the Monthly Reports. Monthly reports are available in **Appendix J** of this FER.

A low and high dust exceedances alarm was activated due to the visible dust generated from off-site non-construction related activities along the Saw Mill River Parkway exit ramp on June 30, 2017. Mowing along the exit ramp was performed by DOT, approximately 50 feet upwind of CAMP Station N-74. Dust and debris were kicked up by the mower and mobilized by 5 plus miles per hour (mph) winds.

4.2.5 CAMP Results

The CAMP includes air monitoring requirements for particulates (PM-10) and VOCs. Action levels for dust and VOCs are discussed in CAMP and Section 4.1.6 of this FER. CAMP monitoring efforts were only performed during the 2017 through 2019 Site intrusive activities; where, impacted soil was uncovered and managed at the Site. Real-time air monitoring activities and CAMP efforts during ground intrusive work were recorded and documented weekly. Exceedances to action levels and corrective actions were reported to NYSDEC and included in the monthly progress report to NYSDEC. Exceedances of action levels occurred in three instances as noted below:

On June 30, 2017, a Low and High Dust Alarm was activated during non-construction related activities along the Saw Mill River Parkway exit ramp. The visible dust was caused the mowing activities performed by DOT. Approximately 50 feet upwind of CAMP Station N-74. Dust and debris were kicked up by the mower and mobilized by 5+ mph winds. There were no corrective actions required due to alarm trigger was off-site work, non-construction related activities.

On August 1, 2017, the VOC exceedance alarm was activated twice (at 1:40 pm and at 3:12 pm). The VOC exceedances were caused by excavation and loading of contaminated soils into dump trucks. The soil was from 10 feet below ground level. For both events, the corrective action included stopping work and spraying odor suppressive foam until VOC levels were below action limits.

Copies of CAMP observations were provided in the monthly progress reports included in Appendix J.

4.2.6 Reporting

Daily reports were completed by the QEP and submitted to the remedial engineer. Monthly reports were submitted to the NYSDEC Project Manager. These reports included the following:

- Activities relative to the Site during the previous reporting period and those anticipated for the next reporting period, including a quantitative presentation of work performed (i.e., tons of material exported and imported, etc.);
- Description of approved activity modifications, including changes of work scope and/or schedule;
- Sampling results received following internal data review and validation, as applicable.

Daily and monthly reports are included in electronic format in Appendix H and J. The digital photo log required by the RAWPA is included in electronic format as Appendix K.

4.3 CONTAMINATED MATERIALS REMOVAL

Remedial actions were completed at the Site between June 2019 through September 2019. RA were conducted in accordance with the 2017 RAWPA. This section describes the removal activities for the Site contaminated media (soils, water, structures, USTs, etc.) during the remedial action.

Contour maps of estimated cut and fill thicknesses for remedial activities at the Site are included in **Figure 3**. A list of the soil cleanup objectives (SCOs) for the contaminants of concern for this project is provided in **Table 3**. A figure of the location of original sources and areas where excavations were performed is shown in **Figure 2** and The record of excavation survey provided in **Appendix A.**

4.3.1 Groundwater

On July 18, 2017, the dewatering system, consisting of consisting of one 18,000-gallon weir tank, and two 21,000-gallon settling tanks, was set-up on Site. Dewatering was required to achieve the remedial excavation depth and to remove the majority of LNAPL at the Site. Dewatering activities started on August 1, 2017 and continue through October 2017 and again in 2018 to support the Site Building elevator pit construction.

Approximately 640,844 gallons of treated water was discharged into the Westchester County Sewer System in accordance with the Westchester County Water Discharge Permit during 2017 and 2018 remedial effort. Dewatering Treatment and Discharge Record is presented in **Appendix L. 1**.

Additionally, a total of 1,992 gallons of groundwater was removed from the Site (1,229 gallons of groundwater was collected and disposed of off-site in August 2019, during the installation of the stormwater management structure (WQS-1A) and 763 gallons of groundwater were extracted in November 2019 from well development activities). Waste groundwater was disposed at Tradebe Treatment & Recycling of Bridgeport, CT. A table showing a summary of the groundwater removed from the Site is presented in **Table 4.** Wastewater profile and disposal tickets are included in **Appendix L. 2**

4.3.2 Soil

The Site was remediated to address petroleum impacted soils to achieve Track 4 RR SCOs. This Track 4 RR SCO remediation is consistent with the proposed redevelopment of the Site.

Remedial action excavation started in July 20, 2017. Benched excavation of contaminated soils was completed to an approximately Elevation of +312.6 Feet (approximately 10 feet below the pre-remediation Site grade). The first cut of the excavation was advanced to the property line and approximately 3.5 feet deep; then the excavation was advanced at a 2-foot horizontal to 1-foot vertical (2 to 1) slope to the bottom of excavation.

4.3.2.1 Soil Disposal Details

NRC carried out the waste characterization program and per NRC Sampling Work Plan dated May 31, 2017, **Appendix Q**. **3**. For waste characterization purposes, the Site was divided into five sampling grids. Soil samples were collected from each grid at depths ranging from 1.5 ft. bgs to 10 ft.bs.

Soil samples quantity and laboratory analysis were completed as per the waste receiving facility, Clean Earth of Carteret, New Jersey (CECNJ). A summary of the samples collected to characterize the waste, and associated analytical results are provided in **Appendix L. 3**. CECNJ waste profile is included in **Appendix L. 4.**

Soil waste characterization data and waste profile was submitted to CECNJ for approval. Clean Earth acceptance letter for receiving non-hazardous under approval No. 173070872 is attached in **Appendix L. 5.**

A total of 7,266.10 tons of non-hazardous soil (5423.60 tons in 2017, 1615.57 tons in 2018 and 226.93 tons in 2019) were excavated and transported from July 2017 through August 16, 2019. Excavated materials were transported and disposed of Site to CECNJ. A table showing a summary of the soil removed from the Site is presented in **Table 4.** Manifests and bills of lading are included in electronic format in **Appendix L**. **6**.

4.3.3 Solid Waste

On August 21, 2017 and during Site remediation activities, the UST observed during the RI, an apparent pressure vessel, was successfully removed, after confirming the pressure vessel was empty. Impacted soils below and around the pressure vessel were removed as part of remediation work and disposed to NYSDEC approved facility.

A total of 20-cy of stone and 20-cy of concrete debris were removed from the Site in 2017. Soil waste was transported to Lawton Adams of Somers, New York, an off-Site facility for disposal. A summary of the soil waste removed from the Site is presented in **Table 4.** Disposal tickets are presented in **Appendix L. 7.**

4.3.4 State Regulated Oil Waste from Construction Dewatering Operations

A total of 946 gallons oil waste was removed from the dewatering system in 2017. The oil waste was transported to Tradebe Treatment & Recycling of Stoughton, Massachusetts for disposal. A summary of the oil waste removed from the Site is presented in **Table 4.** Disposal tickets are presented in **Appendix L. 8.**

Table 4 – Chappaqua Station Remedial Actions Waste Stream Summary

Waste Stream	Duration	Total Off-Site Disposal Volume	Off-Site Disposal Facility
Impacted Soils	July 2017 through August 2019	**7,266.10 Tons**	Clean Earth
Construction Dewatering Activities - Groundwater	August 2017 through October 2017	640,844 Gallons	WC DEF Hunts Place Sanitary Sewer
Construction Dewatering and Well Development-Activities - Groundwater	August 2019 and November 2019	1,992 Gallons	Tradebe Treatment & Recycling of Bridgeport, CT
Construction Dewatering Activities - State Regulated Oil Waste	October 2017	946 Gallons	Tradebe Treatment & Recycling of Stoughton, MA
Solid Waste - Stone	2017	20 Cubic Yards	Lawton Adams (Somers, New York)
Solid Waste - Concrete Debris	October 2017	20 Cubic Yards	Lawton Adams (Somers, New York)

4.4 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING

Remaining contamination is documented by the results of the 11 endpoint samples collected at the bottom of the excavation (at depth of 10 feet bgs), at a frequency of one

per every 900 square feet; and 16 excavation sidewall samples (at a depth of 5 feet bgs), at a frequency of one per every 30 linear feet.

Post-remediation endpoint samples were analyzed by Alpha Analytical Laboratory, a NYSDOH Environmental Laboratory Accreditation Program, for TCL VOCs by the U.S. Environmental Protection Agency (EPA) Method 8260; and TCL metals by EPA Methods 6010, SW846 3060/7196 and SW846 7471A.

Endpoint samples results were compared to the 6 NYCRR Part 375-6.8(b) Unrestricted Used and Restricted Use Soil Cleanup Objectives (UUSCOS and RRSCOs)

Nine samples (B-1, B-4, B-5, B-7, B-10, SW-10, SW-11, SW-2, and SW-3) reported only one or a few VOCs concentrations (1,2,4-Trimethylbenzene, 2-Butanone, Acetone) above Unrestricted Use (UU) SCOs. No VOCs were reported at concentrations above the NYSDEC RR SCOs.

Fifteen samples (B-4, B-9, B-10, SW-1, SW-11, SW-12, SW-13, SW-14, SW-15, SW-16, SW-2, SW-3, SW-4, SW-7, and SW-8) reported only one or a few Metals concentrations at levels exceeding UU SCOs. Only three wall samples reported arsenic concentrations at level exceeding the NYSDEC RR SCOs.

Table 6A and **Table 6B** and **Figure 2** summarize end-point sampling. Reported exceedances of SCOs are highlighted.

Data Usability Summary Reports (DUSRs) were prepared for the required PS&S post-remediation endpoint sample data generated in this remedial performance evaluation program. These DUSRs are included in **Appendix O** and associated raw is provided electronically in **Appendix N**.

4.5 IMPORTED BACKFILL

Backfill material consisting of ASTM Type # 57 Stone and structural fill as imported to the site from Tilcon of West Nyack, New York. Crushed stone used for under the slab was imported from Thalle Industries of Fishkill, New York.

Sampling of the imported material was carried out by NRC. NRC collected representative soil analytical quality samples from the anticipated imported material. Imported Fill Material Submittal # 1 for ASTM Type # 57 Stone, dated July 19, 2017; Imported Fill Material Submittal #2 for Structural Backfill Material, dated July 19, 2017 and Revised Imported Fill Material Submittal # 3: ¾" Size Stone Backfill Material, dated September 18, 2018, that contain laboratory results and certification of clean material was submitted and subsequently approved by NYSDEC prior importation to the Site. Import material documentation and delivery tickets are provided in **Appendix M.**

A summary of the Site Remedial Action imported backfill sources with quantities for each source is shown in **Table 5**, below.

Table 5 –Remedial Actions Imported Fill Material Summary			
Imported Fill Material Supply	**Duration**	**Total Import Volume**	**Imported Fill Material Source**
ASTM Type # 57 Stone (NYSDEC Submittal #1)	July 2017 through October 2017 and September 2019	868.79 Tons	Tilcon – West Nyack, New York
Structural Fill (NYSDEC Submittal #2)	August 2017 through October 2017	3,106.84 Tons	Tilcon – West Nyack, New York
¾-Inch Gravel Under Slab (NYSDEC Submittal #3)	July 2019 through September 2019 And November 2019	72 Tons	Thalle Industries – Fishkill, New York

4.6 CONTAMINATION REMAINING AT THE SITE

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved RAWP, as revised by the RAWP Addendum for the Site in April 2017.

The following sub-sections summarize the contamination remaining at the Site after the remedial action (RA) was implemented, which will be managed in accordance with the Site Management Plan (SMP). The Site was remediated to address petroleum impacted soils to achieve a Track 4 Restricted Residential cleanup. Track 2 RR SCOs were mostly achieved despite the fact that the goal of this remediation was a Track 4 remedy. This Track 4 RR remediation is consistent with the proposed restricted residential redevelopment of the Site.

4.6.1 Soil

A total of 7,266.10 tons of non-hazardous soil (5423.60 tons in 2017, 1615.57 tons in 2018 and 226.93 tons in 2019) were excavated and transported from July 2017 through August 16, 2019.

Remaining contamination was documented by the results of the 11 endpoint samples collected below the demarcation layer at the bottom of the excavation (at depth of 10 feet bgs), at a frequency of one per every 900 square feet; and 16 excavation sidewall samples (at a depth of 5 feet bgs), at a frequency of one per every 30 linear feet.

End-point samples were analyzed by Alpha Analytical Laboratory, a NYSDOH

Environmental Laboratory Accreditation Program for the contaminants of concern VOCs and metals. Endpoint samples results were compared to the 6 NYCRR Part 375-6.8(b) Unrestricted Used and Restricted Use Soil Cleanup Objectives (UUSCOS and RRSCOs)

Only three wall samples SW-11 (45 mg/kg), SW-16 (90.2 mg/kg) and SW-16 (46.2 mg/kg) reported arsenic concentrations at level exceeding the NYSDEC RR SCOs (16 mg/kg).

No VOCs were reported at concentrations above the NYSDEC RR SCOs.

Tables 6A and 6B and **Figure 2** summarize the results of endpoint soil samples that exceeded the UU SCOs and the RR SCOs after completion of remedial action. A cross-section of the excavation and bottom of excavation elevation and demarcation layer are shown in **Figure 3.**

4.6.2 Groundwater

Dewatering was required to achieve the remedial excavation depth and to assist in removing any LNAPL in the on-Site area. Dewatering activities were implemented from August through October 2017. During this period, 640,844 gallons of treated water was discharged into the Westchester County Sewer System in accordance with the Westchester County Water Discharge Permit. In addition, a total of 1,992 gallons of groundwater was removed from the Site (1,229 gallons of groundwater was collected and disposed of off-site in August 2019, during the installation of the stormwater management structure (WQS-1A) and 763 gallons of groundwater were extracted in November 2019 from well development activities). Waste groundwater was disposed at Tradebe Treatment & Recycling of Bridgeport, CT.

After remedial excavation was completed, three (3) NAPL recovery wells (NW-3 through NW-5) were installed with the objective of collecting any LNAPL that remains following the soil removal. To assess post remediation groundwater conditions three (3) groundwater monitoring wells (PGW-6 through PGW-8) were installed at the Site. Well construction logs are presented in **Appendix S.**

On November 19, 2019, a baseline sampling event was completed in adherence with the Draft SMP. Groundwater samples were submitted to the Alpha Analytical for baseline analysis (VOC and metals compounds) as well as the NYSDEC-required emerging contaminant testing.

For reference and to document pre-remediation groundwater conditions, results for the groundwater samples collected during the RI as depicted in **Figure 4.**

Of note, the use of groundwater, unless such use is approved by the NYSDEC, is prohibited as per the Site EE (see **Appendix D**). Furthermore, groundwater in the

vicinity of the Site is not used as a potable water supply.

4.6.3 Soil Vapor

The September 2014 Decision Document concluded that "*the potential exists for inhalation of site contaminants due to soil vapor intrusion for any future on-site development*" and *"[a]t this time, there is insufficient information to evaluate the potential for soil vapor intrusion into structures off-site*".

As part of the Site remediation, the NYSDEC and NYSDOH-required passive vapor venting system under the reinforced/ vapor barrier concrete slab was installed to address the potential for soil vapor intrusion into the future building.

Soil vapor sampling will be conducted prior to occupancy of any future on-Site buildings via ports that have been constructed in the slab and indoor air sampling. In the event soil vapor intrusion is occurring, and if required by NYSDEC or NYSDOH, the passive VMS will be converted to an active VMS, which will be monitored in accordance with the SMP.

For reference and to document pre-remediation soil-vapor conditions, results of the 2012 RI indicated that no VOCs were identified in the soil vapor samples at reported concentrations above the established NYSDOH AGVs. Results of the soil vapor samples collected during the RI are presented in **Table 7**. Location of the 2012 RI Vapor Points is depicted in **Figure 4.**

Since contaminated soil and groundwater remains beneath the site after completion of the Remedial Action, Institutional and Engineering Controls are required to protect human health and the environment. These Engineering and Institutional Controls (ECs/ICs) are described in the following sections. Long-term management of these EC/ICs and residual contamination will be performed under the Site Management Plan (SMP) approved by the NYSDEC.

4.7 SOIL COVER SYSTEM

Exposure to remaining contamination in soil/fill at the site is prevented by a soil cover system placed over the site. This cover system is comprised of the following 2 elements:

1. The building slab composed of a minimum of 12 inches of reinforced concrete; and,
2. An Interim Cap composed of approximately 24 inches of ¾-inch crushed stone material placed in the two areas not capped by the foundation building
    - Eastern property boundary, adjacent to the Metro-North Railroad Property. The top 6 inches of the interim cap placed in this area will be replaced by

the topsoil cap in 2020 as part of the permanent Site improvements. The topsoil cap will comply with the NYSDEC RRSCOs from off-Site sources.

- Northern property boundary. The top 12 inches of the interim cap placed in this area, along the in the center of the Site adjacent to Hunts Place, will be replaced by the asphalt pavement cover system.

The Interim Cover System will eventually be replaced by a soil cover system along the eastern property boundary and an asphalt pavement cover system along the northern property boundary.

Figure 3 shows the record of construction cross sections for each remedial cover type used on the site. **Figure 5** shows the location of each cover type constructed at the Site.

The Site Engineering Controls presented in the attached Sheet SU-1, Final Grade Record of Construction Plan, which consists of the concrete slab of the building and the Interim DGA Cap, encompass 14,622 square feet (refer to FER Appendix A.5). This is slightly less than the 14,635 square feet Environmental Easement area because the slab was poured slightly inside the Environmental Easement boundary in the southwest corner of the site (refer to FER Appendix D). The area not covered by the Site Engineering Control cover system foundation footprint is only 13 square feet, which is a minimal 1- inch to 3-inch offset of the southern and western building line from the property line. This small area has been covered with a 2-foot soil cover system compliant with applicable regulations.

An Excavation Work Plan, which outlines the procedures required in the event the cover system and/or underlying residual contamination are disturbed, is provided in Appendix A of the SMP.

The 2020 interim to permanent cover system construction activities will be performed in accordance with the Site Management Plan (SMP) and the construction activities will be presented in the SMP required Periodic Review Report (PRR).

4.8 OTHER ENGINEERING CONTROLS

Since remaining contaminated soil exists beneath the site, Engineering Controls (EC) are required to protect human health and the environment. The site has the following primary Engineering Controls, as described in the following subsections.

4.8.1 Vapor Management System (VMS)

The passive Vapor Management System (VMS) was composed of the following elements: Sub-Slab Passive Venting System and a Geo-Seal 60 mil Vapor Barrier used as the preferred methodology to mitigate the potential of vapor intrusion. The purpose of the VMS is to collect gas vapors from the sub-slab under the sealed vapor barrier and direct them to the vent riser for discharge to the ambient air above the roof line.

The VMS could become active, if determined necessary by NYSDEC in consultation with the NYSDOH, based on results of the prior occupancy vapor intrusion investigation. Negative pressure would be provided by an active VMS, if needed.

4.8.1.1 Sub-Slab Passive Venting System

The sub-slab venting system consist of approximately 165 linear feet of the 1-foot wide by 1-inch thick Geo-Seal Vapor Vent. The venting system was installed in the ¾" gravel aggregate layer under the sub-slab of the southern occupied areas of the building (laundry room and elevator). In addition, sub-slab passive venting system was installed under the reinforced concrete slab of the electrical room and stairwell located in the northern part of the parking area.

A total of three (3) 6-inch- diameter solid wall PVC vent risers were installed at the Site. Two of the risers are connected to the VMS located in the south portion of the Site and the third risers was installed the northwest portion of the Site. The raisers collected vapors and route them to the roof.

4.8.1.2 Geo-Seal Vapor Barrier

The Geo-Seal 60 mil Vapor Barrier consisted of a multi-layer system; a Geo-Seal BASE fabric, installed on top of the substrate, sprayed with the 60-mil Geo-Seal CORE followed by the Geo-Seal Bond to act as the sealing methodology required per the NYSDOH Soil Vapor Guidance document. Adjoining sections of BASE were overlapped by 6 inches and subsequently sealed with a (minimum of) 60-mil of Geo-Seal Core (CORE), which was a spray-applied asphalt-latex material; pipe penetrations were individually sealed. After installation, the Geo-Seal Vapor Barrier passed the QA/QC smoke test. **Figure 5** presents the location of the VMS components.

Procedures for monitoring, operating and maintaining the VMS system are provided in the SMP. The monitoring plan also addresses inspection procedures that must occur after any severe weather condition has taken place that may affect on-site ECs. Record of construction drawings, signed and sealed by a professional engineer, are included in **Appendix A**. **Figure 5** shows the location of the ECs for the Site.

4.8.2 NAPL Recovery Wells

NAPL was observed during the RI and limited NAPL was observed during the 2017 remedial excavation activities. A total of three NAPL recovery wells (NW-3, NW-4 and NW-5) were installed in October 2018 as part of the RA.

Each NAPL recovery was constructed of 6-inch-diameter Schedule 80 PVC with 10 feet of 0.02-inch screen and covered by an 8-10-inch flush-mounted cover. Depth to water was approximately 6-7 feet below grade. The screen interval was set within the

saturated zone between approximately 5 to 15 feet below grade. Total well depth was 15 feet below grade surface. NAPL and groundwater well construction logs are presented in **Appendix S**. Well Construction Summary is presented in **Table 8**.

These wells will be used to recovery any NAPL present on-Site after RA. NAPL well will not be discontinued unless prior written approval is granted by the NYSDEC. If gauging data indicates that NAPL is no longer present for four consecutive quarterly gauging events (i.e., one year), a proposal to decommission these wells will be submitted to NYSDEC.

Procedures for monitoring, operating and maintaining the NAPL recovery wells is provided in the SMP. The monitoring plan also addresses inspection procedures that must occur after any severe weather condition has taken place that may affect on-site ECs.

4.8.3 Groundwater Monitoring Wells

A total of three NAPL recovery wells (PGW-6, PGW-7 and PGW-8) were installed in October 2018 as part of the RA.

Each groundwater monitoring well was constructed of 2-inch-diameter Schedule 80 PVC with 10 feet of 0.02-inch screen and covered by an 8-10-inch flush-mounted cover. Depth to water was approximately 6-7 feet below grade. The screen interval was set within the saturated zone between approximately 5 to 15 feet below grade. Total well depth was 15 feet below grade surface. Construction Logs are presented in **Appendix S**. Well Construction Summary is presented in **Table 8**.

These wells will be used to assess natural attenuation of contaminants in the groundwater. A petition to cease or reduce groundwater monitoring efforts will be submitted to NYSDEC if groundwater concentrations are found to be consistently below ambient water quality standards, the Site SCGs, or have become asymptotic.

Procedures for monitoring, operating and maintaining the groundwater monitoring wells is provided in the SMP. The monitoring plan also addresses inspection procedures that must occur after any severe weather condition has taken place that may affect on-site ECs.

TABLE 8 - Well Construction Summary

Well ID	Well Diameter	Well Construction Material	Type of Well	Well Location (1)		Top of PVC Well Casing Elevation (2)	Top of Flush Mount Well Casing Elevation (3)
				Northing	Easting		
NW-3	6- inch	SS Well Screen and Solid Wall PVC Riser	NAPL Recovery	848003.8	692001.5	312.33	312.65

NW-4	6- inch	SS Well Screen and Solid Wall PVC Riser	NAPL Recovery	848047.8	691989.7	312.3	312.68
NW-5	6- inch	SS Well Screen and Solid Wall PVC Riser	NAPL Recovery	848075.1	692052.6	312.16	312.64
PGW-6	2- inch	PVC Well Screen and PVC Solid Wall Riser	Groundwater Monitoring	848043.3	692029.9	312.31	312.68
PGW-7	2- inch	PVC Well Screen and PVC Solid Wall Riser	Groundwater Monitoring	848141.9	692094.1	312.3	312.5
PGW-8	2- inch	PVC Well Screen and PVC Solid Wall Riser	Groundwater Monitoring	848165.3	692063.5	312.32	312.60
NOTES							
	(1) Horizontal Datum - North American Datum of 1983 State Plan Coordinates Eastern Zone						
	(2) & (3) Vertical Datum - North American Vertical Datum 1988 (NAVD 88)						

4.9 INSTITUTIONAL CONTROLS

The site remedy requires that an environmental easement be placed on the property to (1) implement, maintain and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to Restricted Residential, Commercial and Industrial uses only.

The environmental easement for the site was executed by the Department on July 19, 2017 and filed with the Westchester County Clerk on August 18, 2017. The County Recording Identifier number for this filing is 561443555. A copy of the easement and proof of filing is provided in **Appendix D**.

4.10 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

Three Field Change Request (FCR) were submitted and subsequently approved by NYSDEC. FCR represent a deviation from the RAWP. A summary of the FCR is provided below. Copy of the FCR and NYSDEC approvals are presented in Appendix D.

<u>FCR#1: NAPL Recovery Wells</u>

- Submission Date: 2/1/2018; revision date: 3/16/2018

- NYSDEC Approval Date: 3/20/2018
- FCR#1 proposes a reduction in the diameters of the NAPL recovery wells from 12 inches (as approved in the NYSDEC-approved RAWP) to 6 inches. FCR # 1 was approved by NYSDEC on March 20, 2018.

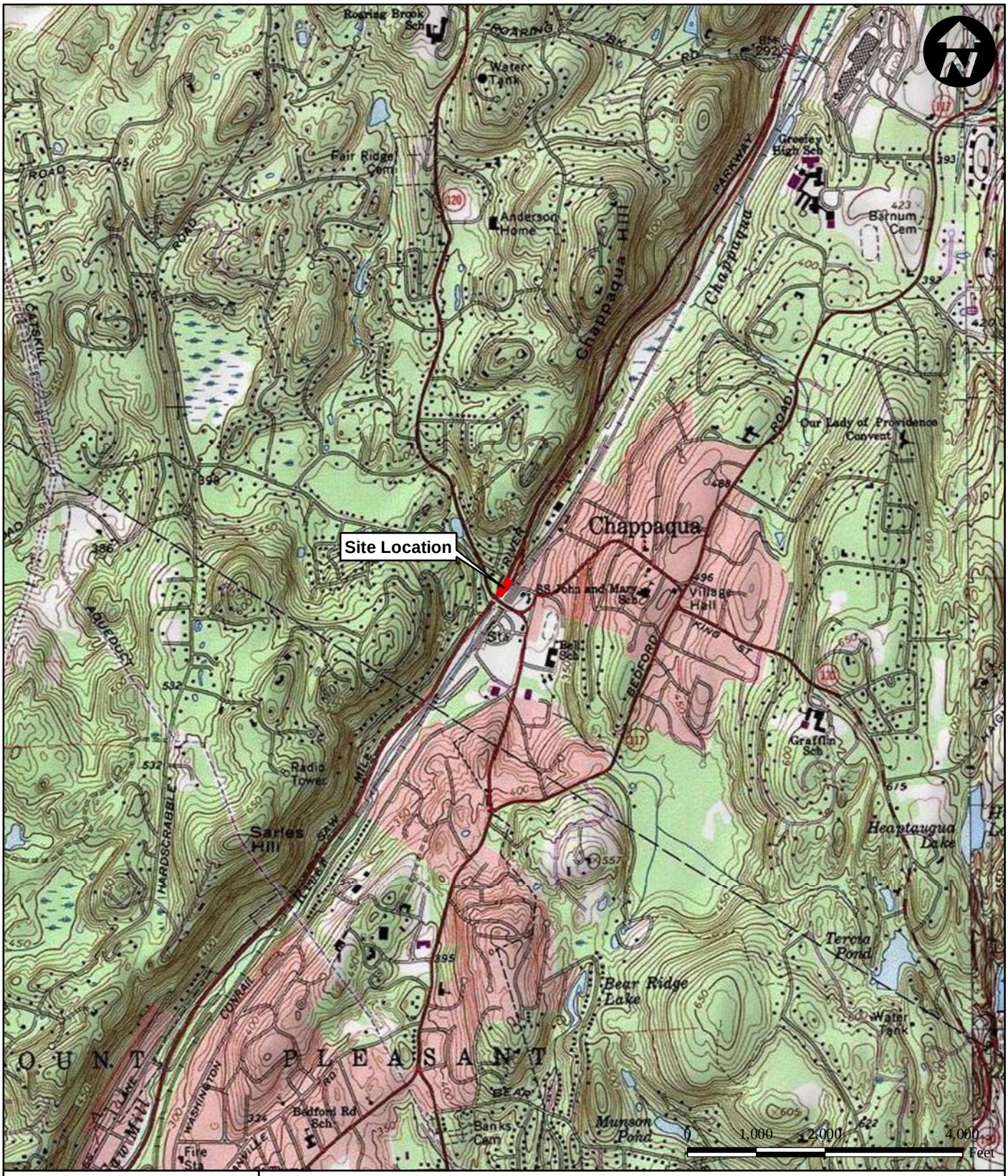
FCR#2: GW Monitoring Wells

- Submission Date: 9/19/2018
- NYSDEC Approval Date: 9/26/2018
- FCR#2 proposes the installation of a total of three 2-inch diameter monitoring groundwater wells. The NYSDEC-approved RAWP called for only two wells. The increase of monitoring wells and revised well locations was proposed to optimize the Site groundwater monitoring footprint. FCR # 2 was approved by NYSDEC on September 26, 2018.

FCR#3: Interim Cap Approach

- Submission Date: 8/1/2019; Formal Submission: 8/14/2019
- NYSDEC Approval Date: 8/8/2019
- FCR#3 proposes the installation of 24-inch-thick Interim Cap in those areas not capped by the footprint of the building foundation. The RAWP initially proposed asphalt and topsoil Cover in those areas where the interim cap was constructed. The Asphalt Pavement Cover System and the Topsoil Cover System presented in the RAWP are currently scheduled for installation during the 2020 construction calendar year as part of the final Site improvements construction activities.

FIGURES



Legend

Property Boundary

Source:
USGS Topographic Map
7.5 Minute Series
Ossining, 1980
STATE PLANE COORDINATES
E 692029
N 848079

USGS SITE LOCATION MAP

54 Hunts Place
Section 100.11, Block 1, Lot 5
Chappaqua, Westchester County, New York

PS&S
integrating design & engineering

Drawn By: JA	Scale: 1" = 2,000'	Project No. 04736.0002
Chk'd By: ES	Date: 04/09/2018	Figure No. 1

Path: P:\04736\001\Y\N\Maps\Fig1_USGS_111611_00.mxd

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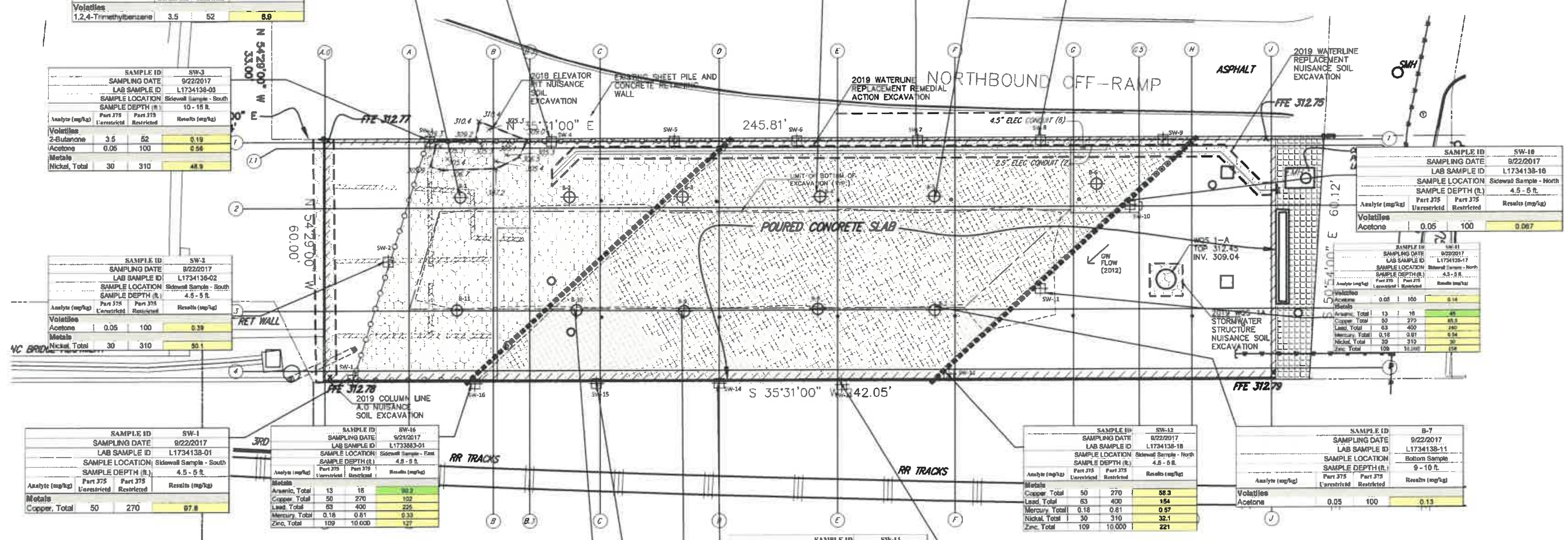


SAMPLE ID			SW-4
SAMPLING DATE			10/13/2017
LAB SAMPLE ID			L1737162-05
SAMPLE LOCATION			Sidewall Sample - West
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Metals			
Lead, Total	63	400	67.2

SAMPLE ID			B-4
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-12
SAMPLE LOCATION			Bottom Sample
SAMPLE DEPTH (ft.)			9 - 10 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Volatiles			
Acetone	0.05	100	0.16
Metals			
Nickel, Total	30	310	37.8

SAMPLE ID			SW-7
SAMPLING DATE			10/13/2017
LAB SAMPLE ID			L1737162-02
SAMPLE LOCATION			Sidewall Sample - West
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Metals			
Copper, Total	50	270	85.6

SAMPLE ID			B-5
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-13
SAMPLE LOCATION			Bottom Sample
SAMPLE DEPTH (ft.)			9 - 10 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Volatiles			
2-Butanone	0.12	100	0.24
Acetone	0.05	100	0.10

SAMPLE ID			SW-8
SAMPLING DATE			10/13/2017
LAB SAMPLE ID			L1737162-01
SAMPLE LOCATION			Sidewall Sample - West
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Metals			
Copper, Total	50	270	56.7
Lead, Total	63	400	108

SAMPLE ID			B-1
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-04
SAMPLE LOCATION			Bottom Sample
SAMPLE DEPTH (ft.)			9 - 10 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Volatiles			
1,2,4-Trimethylbenzene	3.5	52	8.9

SAMPLE ID			SW-3
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-03
SAMPLE LOCATION			Sidewall Sample - South
SAMPLE DEPTH (ft.)			10 - 15 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Volatiles			
2-Butanone	3.5	52	0.19
Acetone	0.05	100	0.56
Metals			
Nickel, Total	30	310	48.9

SAMPLE ID			SW-2
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-02
SAMPLE LOCATION			Sidewall Sample - South
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Volatiles			
Acetone	0.05	100	0.39
Metals			
Nickel, Total	30	310	50.1

SAMPLE ID			SW-10
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-16
SAMPLE LOCATION			Sidewall Sample - North
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Volatiles			
Acetone	0.05	100	0.067

SAMPLE ID			SW-11
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-17
SAMPLE LOCATION			Sidewall Sample - North
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Volatiles			
Acetone	0.05	100	0.14
Metals			
Arsenic, Total	13	16	45
Copper, Total	50	270	85.5
Lead, Total	63	400	240
Mercury, Total	0.18	0.81	0.54
Nickel, Total	30	310	30
Zinc, Total	109	10,000	158

SAMPLE ID			SW-1
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-01
SAMPLE LOCATION			Sidewall Sample - South
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Metals			
Copper, Total	50	270	87.8

SAMPLE ID			SW-16
SAMPLING DATE			9/21/2017
LAB SAMPLE ID			L1733863-01
SAMPLE LOCATION			Sidewall Sample - East
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Metals			
Arsenic, Total	13	16	90.3
Copper, Total	50	270	102
Lead, Total	63	400	225
Mercury, Total	0.18	0.81	0.33
Zinc, Total	109	10,000	127

SAMPLE ID			SW-12
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-18
SAMPLE LOCATION			Sidewall Sample - North
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Metals			
Copper, Total	50	270	58.3
Lead, Total	63	400	154
Mercury, Total	0.18	0.81	0.57
Nickel, Total	30	310	32.1
Zinc, Total	109	10,000	221

SAMPLE ID			B-7
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-11
SAMPLE LOCATION			Bottom Sample
SAMPLE DEPTH (ft.)			9 - 10 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Volatiles			
Acetone	0.05	100	0.13

SAMPLE ID			B-10
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-08
SAMPLE LOCATION			Bottom Sample
SAMPLE DEPTH (ft.)			9 - 10 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Volatiles			
Acetone	0.05	100	0.29J
Metals			
Nickel, Total	30	310	31.5

SAMPLE ID			SW-14
SAMPLING DATE			9/21/2017
LAB SAMPLE ID			L1733863-03
SAMPLE LOCATION			Sidewall Sample - East
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Metals			
Lead, Total	63	400	105
Mercury, Total	0.18	0.81	0.62
Nickel, Total	30	310	30.4
Zinc, Total	109	10,000	961

SAMPLE ID			SW-13
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-19
SAMPLE LOCATION			Sidewall Sample - East
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Metals			
Copper, Total	50	270	55.8
Lead, Total	63	400	150
Mercury, Total	0.18	0.81	0.8
Nickel, Total	30	310	34.4
Zinc, Total	109	10,000	373

SAMPLE ID			SW-15
SAMPLING DATE			9/21/2017
LAB SAMPLE ID			L1733863-02
SAMPLE LOCATION			Sidewall Sample - East
SAMPLE DEPTH (ft.)			4.5 - 5 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Metals			
Arsenic, Total	13	16	48.2
Copper, Total	50	270	90.4
Lead, Total	63	400	173
Mercury, Total	0.18	0.81	0.37
Zinc, Total	109	10,000	195

SAMPLE ID			B-9
SAMPLING DATE			9/22/2017
LAB SAMPLE ID			L1734138-09
SAMPLE LOCATION			Bottom Sample
SAMPLE DEPTH (ft.)			9 - 10 ft.
Analyte (mg/kg)	Part 375 Unrestricted	Part 375 Restricted	Results (mg/kg)
Metals			
Nickel, Total	30	310	33.6

REFERENCE NOTES:

1. EXISTING CONDITIONS SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM DRAWING SU–1, ENTITLED "FINAL GRADE AND ENGINEERING CONTROLS RECORD OF CONSTRUCTION SURVEY" AND ITS ASSOCIATED NOTES. PREPARED BY JOHN MEYER CONSULTING, PC, DATED NOVEMBER 20, 2019.
2. EXISTING BORING LOCATIONS SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM DRAWING CSP–2E, ENTITLED "SITE GRADING PLAN EXHIBIT" AND ITS ASSOCIATED NOTES. PREPARED BY JOHN MEYER CONSULTING, PC, DATED JANUARY 27, 2011.
3. HORIZONTAL DATUM IS IN ASSUMED COORDINATES AS SHOWN ON THIS PLAN AND HAS BEEN TAKEN FROM DRAWING CSP–2E, ENTITLED "SITE GRADING PLAN EXHIBIT" AND ITS ASSOCIATED NOTES. PREPARED BY JOHN MEYER CONSULTING, PC, DATED JANUARY 27, 2011.
4. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM DATED 1988 (NAVD 88) AND AS SHOWN ON THE DRAWING CSP–2E, ENTITLED "SITE GRADING PLAN EXHIBIT" AND ITS ASSOCIATED NOTES. PREPARED BY JOHN MEYER CONSULTING, PC, DATED JANUARY 27, 2011.
5. BOTTOM OF REMEDIAL ACTION EXCAVATION RECORD INFORMATION AS SHOWN ON SHEET SK–101, EXCAVATION AS BUILT SKETCH, PREPARED BY TECTONIC ENGINEERING AND SURVEY CONSULTANTS, PC, (TECTONIC), AND DATED NOVEMBER 10, 2017. REVISION 2. TOP OF REMEDIAL ACTION EXCAVATION BACKFILL AND SHEET PILING PLUS TIMBER LAGGING WALL AS SHOWN ON SHEET SK–102, PREPARED BY TECTONIC AND DATED NOVEMBER 17, 2017, REVISION 3.
6. CROSS–SECTIONS: A–A' & B–B' ARE SHOWN ON FIGURE 4.
7. 2018 ELEVATOR PIT NUISANCE SOIL EXCAVATION LIMITS HAVE BEEN TAKEN FROM DRAWING SU–1, ENTITLED "FINAL GRADE AND ENGINEERING CONTROLS RECORD OF CONSTRUCTION SURVEY" AND ITS ASSOCIATED NOTES. PREPARED BY JOHN MEYER CONSULTING, PC, DATED NOVEMBER 20, 2019.
8. 2018 COLUMN LINE A.0 NUISANCE SOIL EXCAVATION LIMITS AS SHOWN WERE FIELD OBSERVED BY PS&S.
9. COLUMN LINES AS SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM DRAWING SU–1, ENTITLED "FINAL GRADE AND ENGINEERING CONTROLS RECORD OF CONSTRUCTION SURVEY" AND ITS ASSOCIATED NOTES. PREPARED BY JOHN MEYER CONSULTING, PC, DATED NOVEMBER 20, 2019.
10. 2019 WATER LINE REPLACEMENT NUISANCE SOIL AND REMEDIAL ACTIONS AS SHOWN WERE FIELD OBSERVED BY PS&S AND THE WATER LINE ALIGNMENT WAS FIELD OBSERVED AND PROVIDED BY JOHN MEYER CONSULTING, INC. ON NOVEMBER 14, 2019 (FILE: CS WATER LINES 11–14–2019.DWG).
11. 2019 WQS–1A STORMWATER STRUCTURE NUISANCE SOIL EXCAVATION LIMITS SHOWN WAS FIELD OBSERVED BY PS&S AND WQS–1A LOCATION AS SHOWN ON SHEET CD–6, SITE UTILITIES PLAN, PREPARED BY JOHN MEYER CONSULTING, INC.

POST–EXCAVATION CONFIRMATION SAMPLE NOTES

1. BOTTOM POST–EXCAVATION CONFIRMATION SAMPLES (B–1 THROUGH B–11) WERE COLLECTED BY DIRECT PUSH PROBE METHODS ON SEPTEMBER 22, 2017.
2. SIDEWALL POST–EXCAVATION CONFIRMATION SAMPLES (SW–1 THROUGH SW–16) WERE COLLECTED FROM THE EXCAVATION SIDEWALL ON SEPTEMBER 21, 2017, SEPTEMBER 22, 2017 AND OCTOBER 13, 2017 AS THE REMEDIAL ACTION EXCAVATIONS PROGRESSED ACROSS THE SITE.
3. NO LIGHT NON–AQUEOUS PHASE LIQUID (LNAPL) WAS OBSERVED DURING THE SEPTEMBER 2017 AND OCTOBER 2017 PS&S BOTTOM (B–1 THROUGH B–11) AND POST–EXCAVATION SIDEWALL (SW–1 THROUGH SW–16) SAMPLE COLLECTION EFFORTS.

LEGEND

- PROPERTY LINE
- APPROXIMATE LIMITS OF OBSERVED NAPL FROM PRIOR REMEDIAL ACTION
- BOTTOM OF REMEDIAL ACTION EXCAVATION
- HORIZONTAL LIMIT OF THE BOTTOM OF THE REMEDIAL ACTION EXCAVATION
- EXCAVATION LIMITS OF NUISANCE SOILS
- HISTORICAL SOIL BORING/GROUNDWATER PROBE LOCATION
- NIC NOT IN CONTRACT
- DEMARCATION LAYER
- B-1 CONFIRMATORY EXCAVATION BOTTOM SAMPLE
- SW-7 CONFIRMATORY EXCAVATION SIDEWALL SAMPLE
- FOOTPRINT OF REMEDIAL ACTION EXCAVATION
- NUISANCE SOILS EXCAVATION
- HIGHLIGHTED IN GREEN: EXCEEDANCE OF RRSCOs
- HIGHLIGHTED IN YELLOW: EXCEEDANCE OF UUSCOs

UUSCOs: UNRESTRICTED USE SOIL CLEANUP OBJECTIVES
RRSCOs: RESTRICTED RESIDENTIAL USE SOIL CLEANUP OBJECTIVES

ISSUED FOR FER (11/22/2019)

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

ORIENTATION / KEY PLAN

CONSULTANT

CONSULTANT

CLIENT
CHAPPAQUA STATION, LLC
183 EAST MAIN STREET, SUITE 600
ROCHESTER, NY 14604

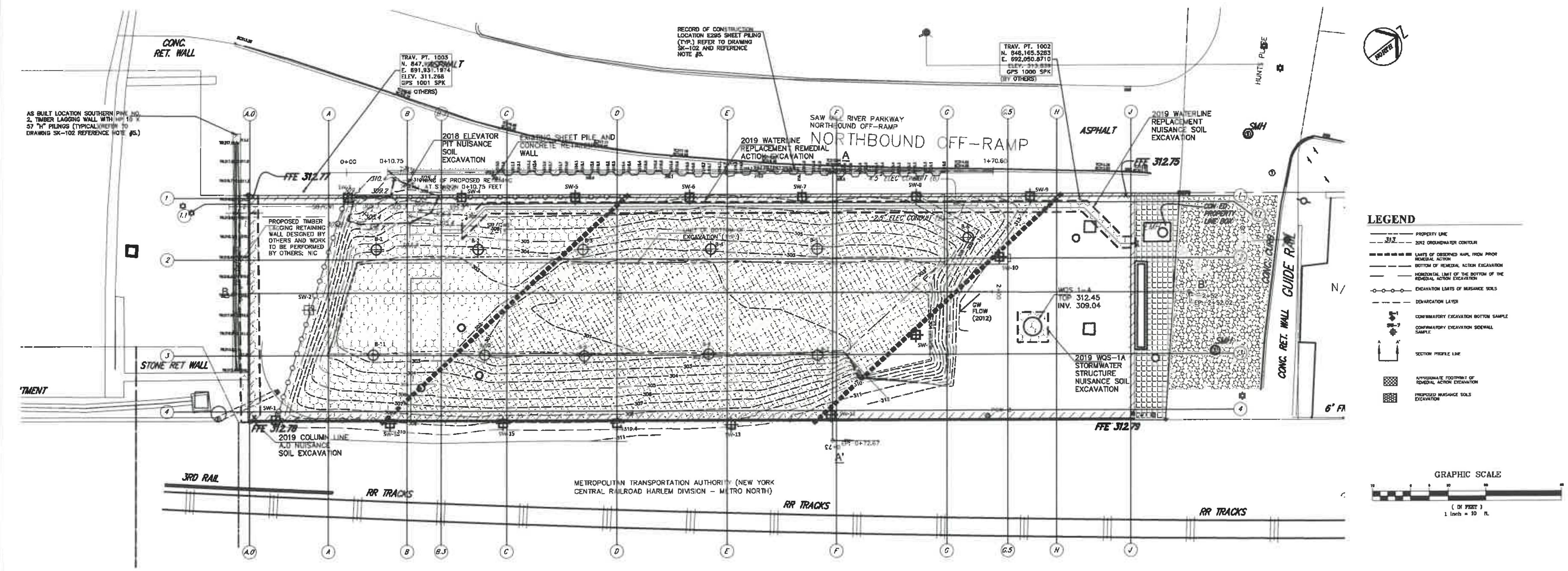
PAULUS, SOKOLOWSKI AND SARTOR, LLC.
ONE LARKIN PLAZA
2ND FLOOR
YONKERS, NY 10701
PHONE: (914) 509-8600
CERTIFICATE OF AUTHORIZATION NO. 24GA28032700

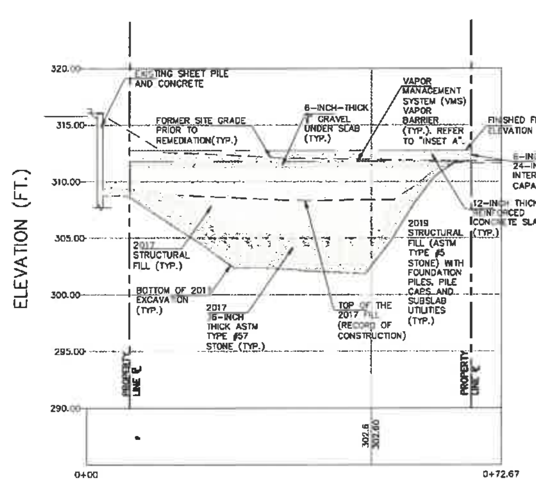
JAN[illegible], P.E.
84542
[illegible]/22/2019

PROJECT
CHAPPAQUA COAL/FUEL & HUMBLE OIL SITE
NYSDEC BCP SITE C360120
54 HUNTS PLACE
CHAPPAQUA, WESTCHESTER COUNTY, NY

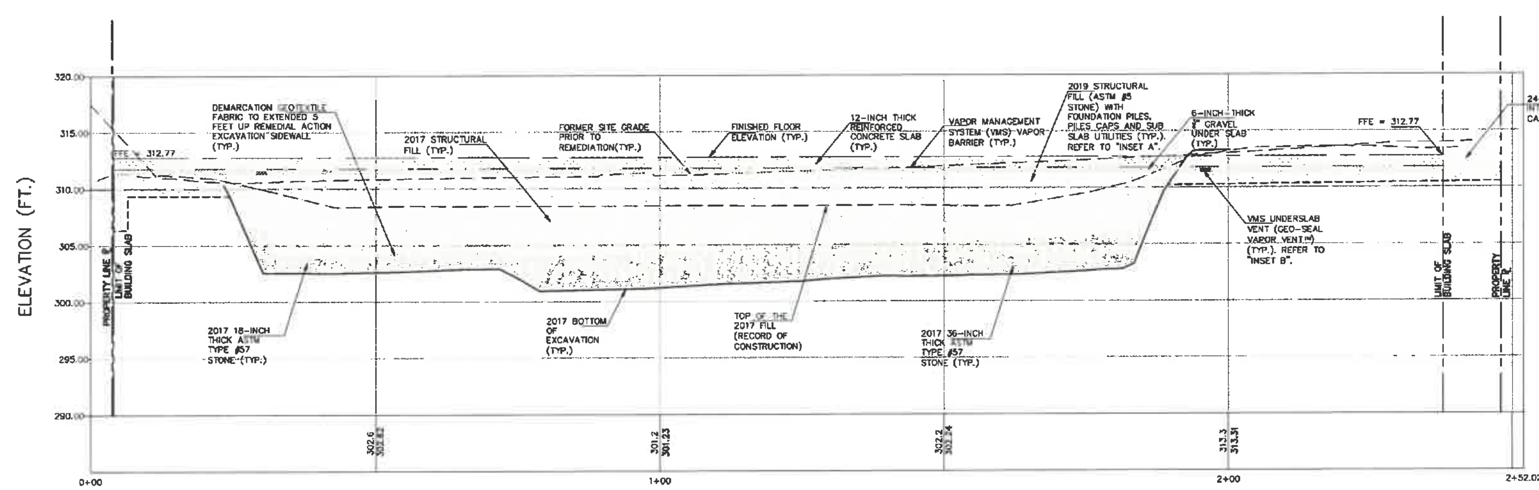
SHEET TITLE
POST EXCAVATION CONFIRMATION SAMPLING PLAN EXCEEDANCES TO UUSCOs & RRSCOs

PROJECT NO.:	04736.0002	DRAWN BY:	ES
SCALE:	AS SHOWN	CHECKED BY:	JMS
DATE:	12/13/17	SHEET	2 OF 5
SHEET NO	FIGURE 2		


CONC. RET. WALL
SAW MILL RIVER PARKWAY NORTHBOUND OFF-RAMP
NORTHBOUND OFF-RAMP
ASPHALT
STONE RET WALL
3RD RAIL
RR TRACKS
METROPOLITAN TRANSPORTATION AUTHORITY (NEW YORK CENTRAL RAILROAD HARLEM DIVISION - METRO NORTH)
FFE 312.77
FFE 312.75
FFE 312.78
FFE 312.79
2019 COLUMN LINE A.0 NUISANCE SOIL EXCAVATION
2018 ELEVATOR PIT NUISANCE SOIL EXCAVATION
2019 WATERLINE REPLACEMENT REMEDIAL ACTION EXCAVATION
2019 WATERLINE REPLACEMENT NUISANCE SOIL EXCAVATION
2019 WQS-1A STORMWATER STRUCTURE NUISANCE SOIL EXCAVATION
WQS-1-A TOP 312.45 INV. 309.04
CONC. RET. WALL
GUIDE RAIL
LEGEND
GRAPHIC SCALE
1 inch = 10 ft.



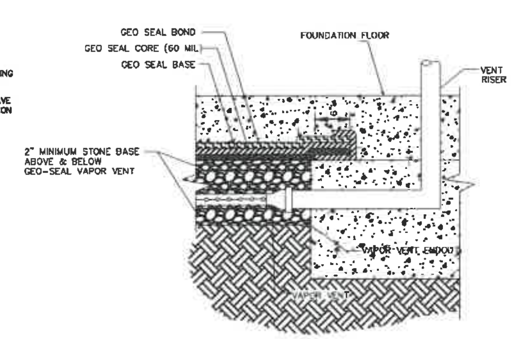
PROFILE OF A–A'



PROFILE OF B–B'

NOTES:

1. SEE REFERENCE NOTES ON FIGURE 2.
2. REFER TO FER FIGURE 5, ENGINEERING CONTROLS FOR THE FINAL GRADE (FINISHED FLOOR ELEVATIONS) AND LIMITS OF THE ENGINEERING CONTROLS.
3. TIMBER LAGGING WALL AND SHEET PILING SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM DRAWING SK-102 ENTITLED "REMEDIAL EXCAVATION BACK FILL AND SITE IMPROVEMENTS RECORD OF CONSTRUCTION PLAN", PREPARED BY TECTONIC ENGINEERING & SURVEYING CONSULTANTS P.C., DATED 10/20/2017.



INSET A – TYPICAL MULTI-LAYER VAPOR MANAGEMENT SYSTEM (VMS) AND VAPOR-VENT VENT RISER

NOT TO SCALE

INSET B – GEOSEAL TYPICAL VAPOR INTRUSION VENT PENETRATION THRU SLAB

NOT TO SCALE

SOURCE: EPROINC.COM

ISSUE FOR FER (11/22/2019)

VERTICAL GRAPHIC SCALE (IN FEET) 1 inch = 5 ft.

HORIZONTAL GRAPHIC SCALE (IN FEET) 1 inch = 10 ft.

REV. / ISSUE	DATE	DESCRIPTION
0	11/22/19	ISSUED FOR FER

ORIENTATION / KEY PLAN

CONSULTANT

CONSULTANT

CLIENT

CHAPPAQUA STATION, LLC
183 EAST MAIN STREET, SUITE 600
ROCHESTER, NY 14604

PAULUS, SOKOLOWSKI AND SARTOR, LLC.
ONE LARKIN PLAZA
2ND FLOOR
YONKERS, NY 10701
PHONE (914) 509-6600
CERTIFICATE OF AUTHORIZATION NO. 24GA28032700

JANOS [illegible], P.E.
PRO[illegible]EER

PROJECT

CHAPPAQUA COAL/FUEL & HUMBLE OIL SITE
NYSDEC BCP SITE
C360120
54 HUNTS PLACE
CHAPPAQUA, WESTCHESTER COUNTY, NY

SHEET TITLE

POST EXCAVATION REMEDIATION CROSS SECTION PLAN

PROJECT NO.:	04735.0002	DRAWN BY:	ES
SCALE:	AS SHOWN	CHECKED BY:	JMS
DATE:	03/16/18	SHEET	3 OF 5
SHEET NO.	FIGURE 3		

NORTH

SAW MILL PARKWAY

QUAKER ROAD

ALLEN PLACE

GROUNDWATER SAMPLE 5
Benzene: 23 ug/L
Isopropylbenzene: 22 ug/L
n-Propylbenzene: 30 ug/L
sec-Butylbenzene: 6.6 ug/L
n-Butylbenzene: 7.2 ug/L
Bis 2-ethylhexyl phthalate: 26 ug/L
Barium: 1110 ug/L
Cadmium: 7.25 ug/L
Chromium: 188 ug/L
Copper: 206 ug/L
Lead: 97.5 ug/L
Magnesium: 42700 ug/L
Selenium: 17.3 ug/L

GROUNDWATER SAMPLE 6
Cadmium: 5.23 ug/L
Chromium: 74.9 ug/L
Copper: 201 ug/L
Lead: 58.9 ug/L

GROUNDWATER SAMPLE 2
Isopropylbenzene: 14 ug/L
n-Propylbenzene: 23 ug/L
1,3,5 Trimethylbenzene: 11 ug/L
1,2,4 Trimethylbenzene: 36 ug/L
n-Butylbenzene: 6.6 ug/L
Chromium: 75.9 ug/L
Lead: 40.8 ug/L

GROUNDWATER SAMPLE 4
Not Sampled

GROUNDWATER SAMPLE 1
Chromium: 75.1 ug/L
Lead: 41.8 ug/L

GROUNDWATER SAMPLE 3
Ethylbenzene: 16 ug/L
Isopropylbenzene: 9.8 ug/L
n-Propylbenzene: 18 ug/L
sec-Butylbenzene: 5.7 ug/L
n-Butylbenzene: 7.7 ug/L

SB7, SB8, SB9, SB10, SB11, SB12
SB/GW1, SB/GW2, SB/GW3, SB/GW4, SB/GW5, SB/GW6
SV1, SV2, SV3, SV4, SV5, SV6, SV7, SV8, SV9, SV10
TP1, TP2, TP3, TP4

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

Legend

- Soil Boring/Groundwater Probe Location
- LNAPL detected in Monitoring Well
- Soil Boring Location
- Soil Vapor Sample Location
- Test Pit Location
- Approximate Site Boundary

PS&S
integrating design & engineering
1 LARKIN PLAZA
2ND FLOOR
YONKERS, NEW YORK 10701
PHONE: (914) 509-8600
FAX: (914) 407-1679

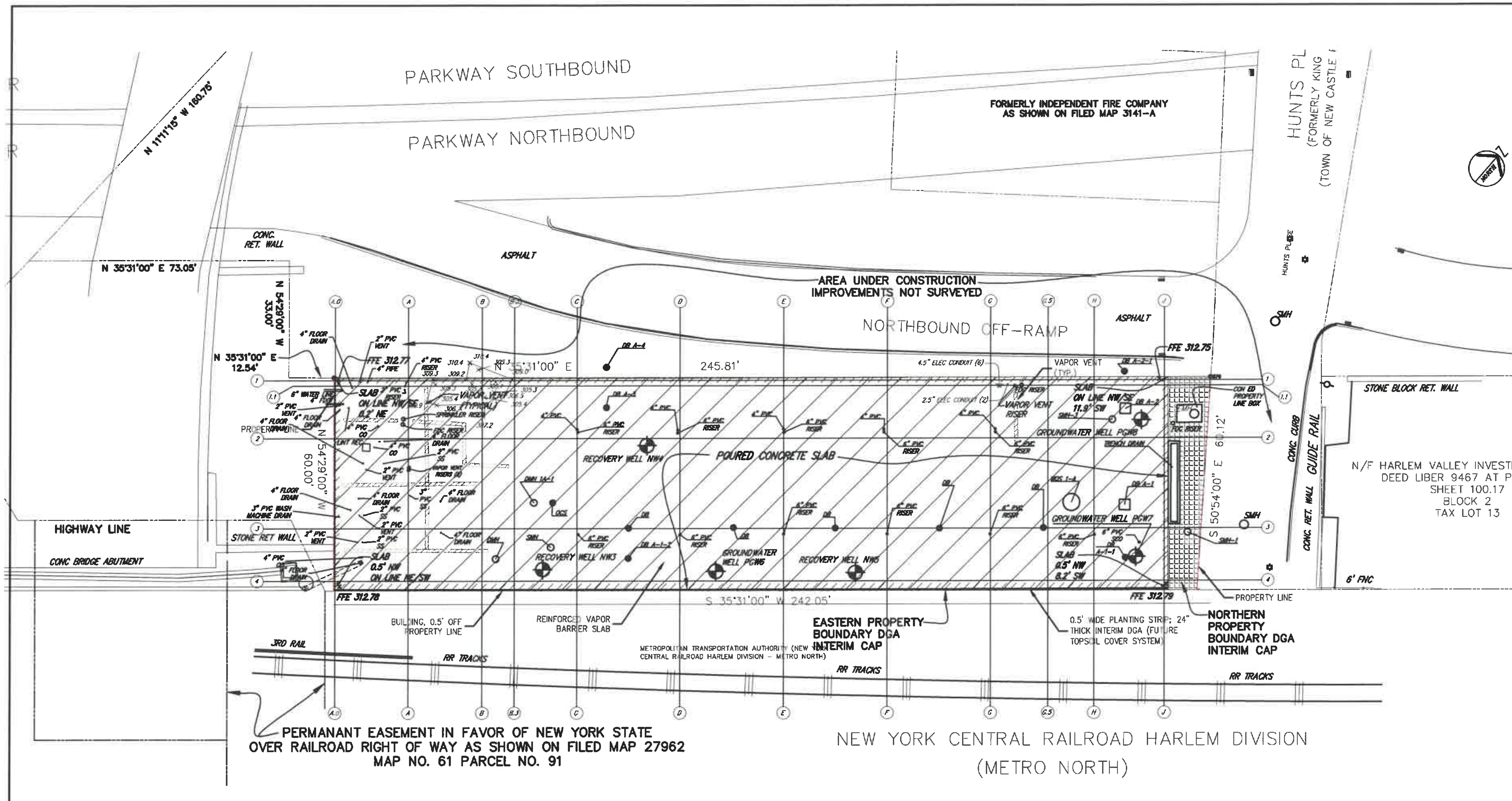
PROJECT TITLE

54 HUNTS PLACE

SHEET TITLE

GROUNDWATER SAMPLE EXCEEDANCES

DATE	05/16/2012	PROJ. NO.	K47360001
SCALE	1"=30'		
DRN. BY	RP	SHT. NO.	4 OF 5
CHK. BY	HN		



REFERENCE NOTES:

1. EXISTING CONDITIONS SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM DRAWING SU-1, ENTITLED "FINAL GRADE AND ENGINEERING CONTROLS RECORD OF CONSTRUCTION SURVEY" AND ITS ASSOCIATED NOTES, PREPARED BY JOHN MEYER CONSULTING, PC, DATED NOVEMBER 20, 2019.
2. EXISTING BORING LOCATIONS SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM DRAWING CSP-2E, ENTITLED "SITE GRADING PLAN EXHIBIT" AND ITS ASSOCIATED NOTES, PREPARED BY JOHN MEYER CONSULTING, PC, DATED JANUARY 27, 2011.
3. HORIZONTAL DATUM IS IN ASSUMED COORDINATES AS SHOWN ON THIS PLAN AND HAS BEEN TAKEN FROM DRAWING CSP-2E, ENTITLED "SITE GRADING PLAN EXHIBIT" AND ITS ASSOCIATED NOTES, PREPARED BY JOHN MEYER CONSULTING, PC, DATED JANUARY 27, 2011.
4. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM DATED 1988 (NAVD 88) AND AS SHOWN ON THE DRAWING CSP-2E, ENTITLED "SITE GRADING PLAN EXHIBIT" AND ITS ASSOCIATED NOTES, PREPARED BY JOHN MEYER CONSULTING, PC, DATED JANUARY 27, 2011.
5. BOTTOM OF REMEDIAL ACTION EXCAVATION RECORD INFORMATION AS SHOWN ON SHEET SK-101, EXCAVATION AS BUILT SKETCH, PREPARED BY TECTONIC ENGINEERING AND SURVEY CONSULTANTS, PC, (TECTONIC), AND DATED NOVEMBER 10, 2017, REVISION 2. TOP OF REMEDIAL ACTION EXCAVATION BACKFILL AND SHEET PILING PLUS TIMBER LAGGING WALL AS SHOWN ON SHEET SK-102, PREPARED BY TECTONIC AND DATED NOVEMBER 17, 2017, REVISION 3.
6. CROSS-SECTIONS: A-A' & B-B' ARE SHOWN ON FIGURE 4.
7. PROPOSED FOOTPRINT OF THE CHAPPAQUA STATION BUILDING, BUILDING SLAB, ASPHALT PAVEMENT, LANDSCAPE AREA, AND CONCRETE SIDEWALK AREA ARE AS SHOWN ON: A. THE JMC DRAWING CD-4 "SITE LAYOUT PLAN", PROGRESS PLOT DATED 06/22/2018; B. WMW DRAWING A-10 "1ST FLOOR PLAN", PROGRESS PLOT DATED 06/18/2018; AND, C. SCS DRAWING S100A "PILE CAP LAYOUT PLAN", LAST REVISED 05/07/2018

TABLE 1 - CHAPPAQUA STATION (BCP SITE C360120) ENGINEERING CONTROLS SUMMARY

ENGINEERING CONTROL (EC)	EC AREA (SQUARE FEET)
REINFORCED CONCRETE SLAB	13,900
EASTERN PROPERTY BOUNDARY INTERIM DGA CAP	120
NORTHERN PROPERTY BOUNDARY INTERIM DGA CAP	602
TOTAL AREA (BLOCK 1, LOT 5)	14,622
TOTAL AREA (BLOCK 1, LOT 5) - ENVIRONMENTAL EASEMENT	14,635

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING FOOTPRINT
- MONITORING NAPL WELL
- 24" INTERIM DGA CAP
- 24" INTERIM CAP AT FUTURE SIDEWALK
- REINFORCED/GEOSEAL VAPOR BARRIER CAP
- SUB-SLAB VMS VAPOR VENT SYSTEM PIPE NETWORK
- VAPOR MANAGEMENT SYSTEM (VMS) RISER

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

ISSUED FOR FER (11/22/2019)

REV / ISSUE	DATE	DESCRIPTION
0	11/22/19	ISSUED FOR FER

ORIENTATION / KEY PLAN

CONSULTANT

CONSULTANT

CLIENT
CHAPPAQUA STATION, LLC
183 EAST MAIN STREET, SUITE 600
ROCHESTER, NY 14604

PAULUS, SOKOLOWSKI AND SARTOR, LLC.
ONE LARKIN PLAZA
2ND FLOOR
YONKERS, NY 10701
PHONE: (914) 509-8600

JANOS MICHAEL SZEMAN, P.E.
PROFESSIONAL ENGINEER
84542
11/22/2019

PROJECT
CHAPPAQUA COAL/FUEL & HUMBLE OIL SITE
NYSDEC BCP SITE C360120
54 HUNTS PLACE
CHAPPAQUA, WESTCHESTER COUNTY, NY

SHEET TITLE
ENGINEERING CONTROLS
BLOCK 1
LOT 5

PROJECT NO.: 04735.0002 | DRAWN BY: ES
SCALE: AS SHOWN | CHECKED BY: JMS
DATE: 06/25/18 | SHEET 5 OF 5
SHEET NO.
FIGURE 5

TABLES

Table 3.0 Soil Cleanup Objectives TableTable
Chappaqua Coal/Fuel Humble Oil Site
NYSDEC BCP Site Number: C360120

Contaminant	CAS Number	Residential	Restricted-Residential
Volatile organic compounds (ppm = mg/kg)			
1,1,1-Trichloroethane [f]	71-55-6	100[a]	100[a]
1,1-Dichloroethane [f]	75-34-3	19	26
1,1-Dichloroethene [f]	75-35-4	100[a]	100[a]
1,2-Dichlorobenzene [f]	95-50-1	100[a]	100[a]
1,2-Dichloroethane	107-06-2	2.3	3.1
cis -1,2-Dichloroethene [f]	156-59-2	59	100[a]
trans-1,2-Dichloroethene [f]	156-60-5	100[a]	100[a]
1,3-Dichlorobenzene [f]	541-73-1	17	49
1,4-Dichlorobenzene	106-46-7	9.8	13
1,4-Dioxane	123-91-1	9.8	13
Acetone	67-64-1	100[a]	100[b]
Benzene	71-43-2	2.9	4.8
n-Butylbenzene [f]	104-51-8	100[a]	100[a]
Carbon tetrachloride [f]	56-23-5	1.4	2.4
Chlorobenzene	108-90-7	100[a]	100[a]
Chloroform	67-66-3	10	49
Ethylbenzene [f]	100-41-4	30	41
Hexachlorobenzene [f]	118-74-1	0.33[e]	1.2
Methyl ethyl ketone	78-93-3	100[a]	100[a]
Methyl tert-butyl ether [f]	1634-04-4	62	100[a]
Methylene chloride	75-09-2	51	100[a]
n - Propylbenzene [f]	103-65-1	100[a]	100[a]
sec-Butylbenzene [f]	135-98-8	100[a]	100[a]
tert-Butylbenzene [f]	98-06-6	100[a]	100[a]
Tetrachloroethene	127-18-4	5.5	19
Toluene	108-88-3	100[a]	100[a]
Trichloroethene	79-01-6	10	21
1,2,4-Trimethylbenzene [f]	95-63-6	47	52
1,3,5-Trimethylbenzene[f]	108-67-8	47	52
Vinyl chloride[f]	75-01-4	0.21	0.9
Xylene (mixed)	1330-20-7	100[a]	100[a]

Table 3.0 Soil Cleanup Objectives TableTable
Chappaqua Coal/Fuel Humble Oil Site
NYSDEC BCP Site Number: C360120

Metals (ppm = mg/kg)			
Arsenic	7440-38-2	16[f]	16[f]
Barium	7440-39-3	350[f]	400
Beryllium	7440-41-7	14	72
Cadmium	7440-43-9	2.5[f]	4.3
Chromium, hexavalent [e]	18540-29-9	22	110
Chromium, trivalent [e]	16065-83-1	36	180
Copper	7440-50-8	270	270
Total Cyanide [e, f]		27	27
Lead	7439-92-1	400	400
Manganese	7439-96-5	2,000[f]	2,000[f]
Total Mercury		0.81[j]	0.81[j]
Nickel	7440-02-0	140	310
Selenium	7782-49-2	36	180
Silver	7440-22-4	36	180
Zinc	7440-66-6	2200	10,000 [d]

Table 3 is derivated from New York NYCRR Part 375 Environmental Remediation Programs, Soil Cleanup Objectives effective December 14, 2006.

All soil cleanup objectives (SCOs) are in parts per million (ppm).

Footnote:

a The SCOs for unrestricted use were capped at a maximum value of 100 ppm. See Technical Support Document (TSD), section 9.3.

b For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.

c For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 1 SCO value for this use of the site.

d SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

e The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

f Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) with “NS”. Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the Department to calculate a protection of ecological resources SCO according to the TSD.

Table 6A: Remaining Soil Sample Exceedance - Volatile Organic
Compounds Chappaqua Coal/Fuel Humble Oil Site
NYSDEC BCP Site Number: C360120

SAMPLE ID				B-1		B-2		B-3		B-4		B-5		B-6		B-7		B-8		B-9		B-10		B-11		SW-1		SW-2		SW-3		SW-4	
SAMPLING DATE				9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		10/13/2017	
LAB SAMPLE ID				L1734138-04		L1734138-07		L1734138-08		L1734138-12		L1734138-13		L1734138-14		L1734138-11		L1734138-10		L1734138-09		L1734138-06		L1734138-05		L1734138-01		L1734138-02		L1734138-03		L1737162-05	
SAMPLE LOCATION				Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Sidewall Sample - South		Sidewall Sample - South		Sidewall Sample - South		Sidewall Sample - West	
SAMPLE DEPTH (ft.)				9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		10 - 15 ft.		4.5 - 5 ft.		4.5 - 5 ft.		10 - 15 ft.		4.5 - 5 ft.	
	CasNum	NY-UNRES	NY-RESRR	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
Volatile Organics by 8260/5035 (mg/kg)																																	
1,1,1,2-Tetrachloroethane	630-20-6			ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
1,1,1-Trichloroethane	71-55-6	0.68	100	ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
1,1,2,2-Tetrachloroethane	79-34-5			ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
1,1,2-Trichloroethane	79-00-5			ND	0.37	ND	0.44	ND	0.24	ND	0.0016	ND	0.0016	ND	0.0015	ND	0.0019	ND	0.0019	ND	0.48	ND	0.13	ND	0.0019	ND	0.0019	ND	0.0032	ND	0.0042	ND	0.0016
1,1-Dichloroethane	75-34-3	0.27	26	ND	0.37	ND	0.44	ND	0.24	ND	0.0016	ND	0.0016	ND	0.0015	ND	0.0019	ND	0.0019	ND	0.48	ND	0.13	ND	0.0019	ND	0.0019	ND	0.0032	ND	0.0042	ND	0.0016
1,1-Dichloroethene	75-35-4	0.33	100	ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
1,1-Dichloropropene	563-58-6			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
1,2,3-Trichlorobenzene	87-61-6			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
1,2,3-Trichloropropane	96-18-4			ND	2.5	ND	3	ND	1.6	ND	0.011	ND	0.011	ND	0.01	ND	0.013	ND	0.012	ND	3.2	ND	0.87	ND	0.012	ND	0.012	ND	0.021	ND	0.028	ND	0.011
1,2,4,5-Tetramethylbenzene	95-93-2			6.8	0.98	6.8	1.2	3.8	0.63	0.031	0.0044	0.0051	0.0043	ND	0.004	0.027	0.0051	0.025	0.005	7.1	1.3	0.72	0.35	0.0039J	0.005	ND	0.005	ND	0.0085	0.32	0.011	ND	0.0044
1,2,4-Trichlorobenzene	120-82-1			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
1,2,4-Trimethylbenzene	95-63-6	3.6	52	8.9	1.2	0.092J	1.5	ND	0.79	0.0012J	0.0055	ND	0.0054	ND	0.005	0.00048J	0.0064	0.0008J	0.0063	0.69J	1.6	0.17J	0.43	0.0038J	0.0062	ND	0.0062	ND	0.011	0.4	0.014	ND	0.0055
1,2-Dibromo-3-chloropropane	96-12-8			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
1,2-Dibromoethane	106-93-4			ND	0.98	ND	1.2	ND	0.63	ND	0.0044	ND	0.0043	ND	0.004	ND	0.0051	ND	0.005	ND	1.3	ND	0.35	ND	0.005	ND	0.005	ND	0.0085	ND	0.011	ND	0.0044
1,2-Dichlorobenzene	95-50-1	1.1	100	ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
1,2-Dichloroethane	107-06-2	0.02	3.1	ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
1,2-Dichloroethene, Total	540-59-0			ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
1,2-Dichloropropane	78-87-5			ND	0.86	ND	1	ND	0.55	ND	0.0038	ND	0.0038	ND	0.0035	ND	0.0045	ND	0.0044	ND	1.1	ND	0.3	ND	0.0044	ND	0.0043	ND	0.0074	ND	0.0098	ND	0.0039
1,3,5-Trimethylbenzene	108-67-8	8.4	52	3.8	1.2	0.067J	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	0.00022J	0.0063	0.17J	1.6	0.078J	0.43	0.0013J	0.0062	ND	0.0062	ND	0.011	0.054	0.014	ND	0.0055
1,3-Dichlorobenzene	541-73-1	2.4	49	ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
1,3-Dichloropropane	142-28-9			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
1,3-Dichloropropene, Total	542-75-6			ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
1,4-Dichlorobenzene	106-46-7	1.8	13	ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
1,4-Dioxane	123-91-1	0.1	13	ND	9.8	ND	12	ND	6.3	ND	0.044	ND	0.043	ND	0.04	ND	0.051	ND	0.05	ND	13	ND	3.5	ND	0.05	ND	0.05	ND	0.085	ND	0.11	ND	0.044
2,2-Dichloropropane	594-20-7			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
2-Butanone	78-93-3	0.12	100	ND	2.5	ND	3	ND	1.6	0.052	0.011	0.24	0.011	0.0033J	0.01	0.036	0.013	0.012	0.012	ND	3.2	ND	0.87	ND	0.012	ND	0.012	0.095	0.021	0.19	0.028	ND	0.011
2-Hexanone	591-78-6			ND	2.5	ND	3	ND	1.6	ND	0.011	ND	0.011	ND	0.01	ND	0.013	ND	0.012	ND	3.2	ND	0.87	ND	0.012	ND	0.012	ND	0.021	ND	0.028	ND	0.011
4-Methyl-2-pentanone	108-10-1			ND	2.5	ND	3	ND	1.6	ND	0.011	ND	0.011	ND	0.01	ND	0.013	ND	0.012	ND	3.2	ND	0.87	ND	0.012	ND	0.012	ND	0.021	ND	0.028	ND	0.011
Acetone	67-64-1	0.05	100	ND	2.5	ND	3	ND	1.6	0.16	0.011	0.1	0.011	0.027	0.01	0.13	0.013	0.034	0.012	ND	3.2	0.29J	0.87	ND	0.012	ND	0.012	0.39	0.021	0.56	0.028	ND	0.011
Acrylonitrile	107-13-1			ND	2.5	ND	3	ND	1.6	ND	0.011	ND	0.011	ND	0.01	ND	0.013	ND	0.012	ND	3.2	ND	0.87	ND	0.012	ND	0.012	ND	0.021	ND	0.028	ND	0.011
Benzene	71-43-2	0.06	4.8	ND	0.25	ND	0.3	ND	0.16	0.00029J	0.0011	ND	0.0011	ND	0.001	ND	0.0013	0.00042J	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
Bromobenzene	108-86-1			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
Bromochloromethane	74-97-5			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
Bromodichloromethane	75-27-4			ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
Bromoform	75-25-2			ND	0.98	ND	1.2	ND	0.63	ND	0.0044	ND	0.0043	ND	0.004	ND	0.0051	ND	0.005	ND	1.3	ND	0.35	ND	0.005	ND	0.005	ND	0.0085	ND	0.011	ND	0.0044
Bromomethane	74-83-9			ND	0.49	ND	0.59	0.095J	0.31	ND	0.0022	ND	0.0021	ND	0.002	ND	0.0026	ND	0.0025	ND	0.64	0.063J	0.17	ND	0.0025	ND	0.0025	ND	0.0042	ND	0.0056	ND	0.0022
Carbon disulfide	75-15-0			ND	2.5	ND	3	ND	1.6	0.0041J	0.011	0.002J	0.011	ND	0.01	0.002J	0.013	0.0016J	0.012	ND	3.2	ND	0.87	ND	0.012	ND	0.012	0.0038J	0.021	0.0046J	0.028	ND	0.011
Carbon tetrachloride	56-23-5	0.76	2.4	ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
Chlorobenzene	108-90-7	1.1	100	ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
Chloroethane	75-00-3			ND	0.49	ND	0.59	ND	0.31	ND	0.0022	ND	0.0021	ND	0.002	ND	0.0026	ND	0.0025	ND	0.64	ND	0.17	ND	0.0025	ND	0.0025	ND	0.0042	ND	0.0056	ND	0.0022
Chloroform	67-66-3	0.37	49	ND	0.37	ND	0.44	ND	0.24	ND	0.0016	ND	0.0016	ND	0.0015	ND	0.0019	ND	0.0019	ND	0.48	ND	0.13	ND	0.0019	ND	0.0019	ND	0.0032	ND	0.0042	ND	0.0016
Chloromethane	74-87-3			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
cis-1,2-Dichloroethene	156-59-2	0.25	100	ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
cis-1,3-Dichloropropene	10061-01-5			ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
Dibromochloromethane	124-48-1			ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
Dibromomethane	74-95-3			ND	2.5	ND	3	ND	1.6	ND	0.011	ND	0.011	ND	0.01	ND	0.013	ND	0.012	ND	3.2	ND	0.87	ND	0.012	ND	0.012	ND	0.021	ND	0.028	ND	0.011
Dichlorodifluoromethane	75-71-8			ND	2.5	ND	3	ND	1.6	ND	0.011	ND	0.011	ND	0.01	ND	0.013	ND	0.012	ND	3.2	ND	0.87	ND	0.012	ND	0.012	ND	0.021	ND	0.028	ND	0.011
Ethyl ether	60-29-7			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
Ethylbenzene	100-41-4	1	41	0.31	0.25	ND	0.3	ND	0.16	0.00021J	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	0.096J	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
Hexachlorobutadiene	87-68-3			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
Isopropylbenzene	98-82-8			0.95	0.25	1.3	0.3	0.25	0.16	0.021	0.0011	0.0035	0.0011	ND	0.001	0.0052	0.0013	0.0071	0.0012	0.99	0.32	0.28	0.087	ND	0.0012	ND	0.0012	ND	0.0021	0.19	0.0028	ND	0.0011
Methyl tert butyl ether	1634-04-4	0.93	100	ND	0.49	ND	0.59	ND	0.31	ND	0.0022	ND	0.0021	ND	0.002	ND	0.0026	ND	0.0025	ND	0.64	ND	0.17	ND	0.0025	ND	0.0025	ND	0.0042	ND	0.0056	ND	0.0022
Methylene chloride	75-09-2	0.05	100	ND	2.5	ND	3	ND	1.6	ND	0.011	ND	0.011	ND	0.01	ND	0.013	ND	0.012	ND	3.2	ND	0.87	ND	0.012	ND	0.012	ND	0.021	ND	0.028	ND	0.011
n-Butylbenzene	104-51-8	12	100	2.5	0.25	2.7	0.3	1.1	0.16	0.0046	0.0011	ND	0.0011	ND	0.001	0.0018	0.0013	0.0055	0.0012	2.4	0.32	0.069J	0.087	0.0029	0.0012	ND	0.0012	ND	0.0021	0.087	0.0028	ND	0.0011
n-Propylbenzene	103-65-1	3.9	100	2	0.25	2.8	0.3	0.54	0.16	0.03	0.0011	0.0025	0.0011	ND	0.001	0.0081	0.0013	0.0098	0.0012	2.1	0.32	0.64	0.087	0.0006J	0.0012	ND	0.0012	ND	0.0021	0.25	0.0028	ND	0.0011
Naphthalene	91-20-3	12	100	3.5	1.2	ND	1.5	ND	0.79	ND	0.0055	0.0035J	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	0.14J	0.43	0.0034J	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
o-Chlorotoluene	95-49-8			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
o-Xylene	95-47-6			ND	0.49	ND	0.59	ND	0.31	0.00057J	0.0022	ND	0.0021	ND	0.002	ND	0.0026	ND	0.0025	ND	0.64	ND	0.17	ND	0.0025	ND	0.0025	ND	0.0042	0.0044J	0.0056	ND	0.0022
p-Chlorotoluene	106-43-4			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
p-Diethylbenzene	105-05-5			8.3	0.98	2.2	1.2	0.87	0.63	0.0061	0.0044	ND	0.0043	ND	0.004	0.0053	0.0051	0.0062	0.005	2.3	1.3	ND	0.35	0.0052	0.005	ND	0.005	ND	0.0085	0.086	0.011	ND	0.0044
p-Ethyltoluene	622-96-8			0.096J	0.98	ND	1.2	ND	0.63	0.00031J	0.0044	ND	0.0043	ND	0.004	ND	0.0051	ND	0.005	ND	1.3	ND	0.35	ND	0.005	ND	0.005	ND	0.0085	0.0097J	0.011	ND	0.0044
p-Isopropyltoluene	99-87-6			ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	0.2J	0.32	ND	0.087	0.00059J	0.0012	ND	0.0012	ND	0.0021	0.022	0.0028	ND	0.0011
p/m-Xylene	179601-23-1			ND	0.49	ND	0.59	ND	0.31	0.00071J	0.0022	ND	0.0021	ND	0.002	ND	0.0026	ND	0.0025	ND	0.64	ND	0.17	ND	0.0025	ND	0.0025	ND	0.0042	0.0075	0.0056	ND	0.0022
sec-Butylbenzene	135-98-8	11	100	1.6	0.25	1.9	0.3	0.84	0.16	0.0089	0.0011	0.002	0.0011	ND	0.001	0.0058	0.0013	0.0073	0.0012	1.8	0.32	0.096	0.087	0.00079J	0.0012	ND	0.0012	0.00055J	0.0021	0.1	0.0028	ND	0.0011
Styrene	100-42-5			ND	0.49	ND	0.59	ND	0.31	ND	0.0022	ND	0.0021	ND	0.002	ND	0.0026	ND	0.0025	ND	0.64	ND	0.17	ND	0.0025	ND	0.0025	ND	0.0042	ND	0.0056	ND	0.0022
tert-Butylbenzene	98-06-6	5.9	100	0.21J	1.2	0.22J	1.5	0.14J	0.79	0.0024J	0.0055	0.0009J	0.0054	ND	0.005	0.0014J	0.0064	0.0013J	0.0063	0.25J	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	0.022	0.014	ND	0.0055
Tetrachloroethene	127-18-4	1.3	19	ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
Toluene	108-88-3	0.7	100	ND	0.37	ND	0.44	ND	0.24	ND	0.0016	ND	0.0016	ND	0.0015	ND	0.0019	ND	0.0019	ND	0.48	ND	0.13	ND	0.0019	ND	0.0019	ND	0.0032	0.0022J	0.0042	ND	0.0016
trans-1,2-Dichloroethene	156-60-5	0.19	100	ND	0.37	ND	0.44	ND	0.24	ND	0.0016	ND	0.0016	ND	0.0015	ND	0.0019	ND	0.0019	ND	0.48	ND	0.13	ND	0.0019	ND	0.0019	ND	0.0032	ND	0.0042	ND	0.0016
trans-1,3-Dichloropropene	10061-02-6			ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
trans-1,4-Dichloro-2-butene	110-57-6			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
Trichloroethene	79-01-6	0.47	21	ND	0.25	ND	0.3	ND	0.16	ND	0.0011	ND	0.0011	ND	0.001	ND	0.0013	ND	0.0012	ND	0.32	ND	0.087	ND	0.0012	ND	0.0012	ND	0.0021	ND	0.0028	ND	0.0011
Trichlorofluoromethane	75-69-4			ND	1.2	ND	1.5	ND	0.79	ND	0.0055	ND	0.0054	ND	0.005	ND	0.0064	ND	0.0063	ND	1.6	ND	0.43	ND	0.0062	ND	0.0062	ND	0.011	ND	0.014	ND	0.0055
Vinyl acetate	108-05-4			ND	2.5	ND	3	ND	1.6	ND	0.011	ND	0.011	ND	0.01	ND	0.013	ND	0.012	ND	3.2	ND	0.87	ND	0.012	ND	0.012	ND	0.021	ND	0.028	ND	0.011
Vinyl chloride	75-01-4	0.02	0.9	ND	0.49	ND	0.59	ND	0.31	ND	0.0022	ND	0.0021	ND	0.002	ND	0.0026	ND	0.0025	ND	0.64	ND	0.17	ND	0.0025	ND	0.0025	ND	0.0042	ND	0.0056	ND	0.0022
Xylenes, Total	1330-20-7	0.26	100	ND	0.49	ND	0.59	ND	0.31	0.0013J	0.0022	ND	0.0021	ND	0.002	ND	0.0026	ND	0.0025	ND	0.64	ND	0.17	ND	0.0025	ND	0.0025	ND	0.0042	0.012J	0.0056	ND	0.0022

* Comparison is not performed on parameters with non-numeric criteria.

Denotes concentrations above Unrestricted Use SCOs

Denotes concentrations above Restricted-Residential Use SCOs

Denotes laboratory Reporting Limit is higher than at least one of the comparison criteria.

ND: Not detected at the reported detection limit for the sample.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

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Table 6A: Remaining Soil Sample Exceedance - Volatile Organic
Compounds Chappaqua Coal/Fuel Humble Oil Site
NYSDEC BCP Site Number: C360120

SAMPLE ID				SW-5		SW-6		SW-7		SW-8		SW-9		SW-10		SW-11		SW-12		SW-13		SW-14		SW-15		SW-16	
SAMPLING DATE				10/13/2017		10/13/2017		10/13/2017		10/13/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/21/2017		9/21/2017		9/21/2017	
LAB SAMPLE ID				L1737162-04		L1737162-03		L1737162-02		L1737162-01		L1734138-15		L1734138-16		L1734138-17		L1734138-18		L1734138-19		L1733883-03		L1733883-02		L1733883-01	
SAMPLE LOCATION				Sidewall Sample - West		Sidewall Sample - West		Sidewall Sample - West		Sidewall Sample - West		Sidewall Sample - West		Sidewall Sample - North		Sidewall Sample - North		Sidewall Sample - North		Sidewall Sample - East		Sidewall Sample - East		Sidewall Sample - East		Sidewall Sample - East	
SAMPLE DEPTH (ft.)				4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.	
	CasNum	NY-UNRES	NY-RESRR	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
Volatile Organics by 8260/5035 (mg/kg)																											
1,1,1,2-Tetrachloroethane	630-20-6			ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
1,1,1-Trichloroethane	71-55-6	0.68	100	ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
1,1,2,2-Tetrachloroethane	79-34-5			ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
1,1,2-Trichloroethane	79-00-5			ND	0.0016	ND	0.0015	ND	0.0016	ND	0.093	ND	0.0019	ND	0.0023	ND	0.0024	ND	0.0022	ND	0.0018	ND	0.002	ND	0.002	ND	0.0021
1,1-Dichloroethane	75-34-3	0.27	26	ND	0.0016	ND	0.0015	ND	0.0016	ND	0.093	ND	0.0019	ND	0.0023	ND	0.0024	ND	0.0022	ND	0.0018	ND	0.002	ND	0.002	ND	0.0021
1,1-Dichloroethene	75-35-4	0.33	100	ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
1,1-Dichloropropene	563-58-6			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
1,2,3-Trichlorobenzene	87-61-6			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
1,2,3-Trichloropropane	96-18-4			ND	0.01	ND	0.0099	ND	0.011	ND	0.62	ND	0.013	ND	0.015	ND	0.016	ND	0.015	ND	0.012	ND	0.014	ND	0.014	ND	0.014
1,2,4,5-Tetramethylbenzene	95-93-2			ND	0.0042	ND	0.0039	0.00026J	0.0043	4.3	0.25	ND	0.0051	ND	0.0061	ND	0.0065	ND	0.006	ND	0.0049	ND	0.0054	ND	0.0055	ND	0.0056
1,2,4-Trichlorobenzene	120-82-1			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
1,2,4-Trimethylbenzene	95-63-6	3.6	52	ND	0.0053	ND	0.0049	ND	0.0053	0.37	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
1,2-Dibromo-3-chloropropane	96-12-8			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
1,2-Dibromoethane	106-93-4			ND	0.0042	ND	0.0039	ND	0.0043	ND	0.25	ND	0.0051	ND	0.0061	ND	0.0065	ND	0.006	ND	0.0049	ND	0.0054	ND	0.0055	ND	0.0056
1,2-Dichlorobenzene	95-50-1	1.1	100	ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
1,2-Dichloroethane	107-06-2	0.02	3.1	ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
1,2-Dichloroethene, Total	540-59-0			ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
1,2-Dichloropropane	78-87-5			ND	0.0037	ND	0.0034	ND	0.0037	ND	0.22	ND	0.0044	ND	0.0053	ND	0.0057	ND	0.0052	ND	0.0043	ND	0.0047	ND	0.0048	ND	0.0049
1,3,5-Trimethylbenzene	108-67-8	8.4	52	ND	0.0053	ND	0.0049	ND	0.0053	0.024J	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
1,3-Dichlorobenzene	541-73-1	2.4	49	ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
1,3-Dichloropropane	142-28-9			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
1,3-Dichloropropene, Total	542-75-6			ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
1,4-Dichlorobenzene	106-46-7	1.8	13	ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
1,4-Dioxane	123-91-1	0.1	13	ND	0.042	ND	0.039	ND	0.043	ND	2.5	ND	0.051	ND	0.061	ND	0.065	ND	0.06	ND	0.049	ND	0.054	ND	0.055	ND	0.056
2,2-Dichloropropane	594-20-7			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
2-Butanone	78-93-3	0.12	100	ND	0.01	ND	0.0099	ND	0.011	ND	0.62	ND	0.013	0.01J	0.015	0.021	0.016	ND	0.015	ND	0.012	ND	0.014	ND	0.014	ND	0.014
2-Hexanone	591-78-6			ND	0.01	ND	0.0099	ND	0.011	ND	0.62	ND	0.013	ND	0.015	ND	0.016	ND	0.015	ND	0.012	ND	0.014	ND	0.014	ND	0.014
4-Methyl-2-pentanone	108-10-1			ND	0.01	ND	0.0099	ND	0.011	ND	0.62	ND	0.013	ND	0.015	ND	0.016	ND	0.015	ND	0.012	ND	0.014	ND	0.014	ND	0.014
Acetone	67-64-1	0.05	100	ND	0.01	ND	0.0099	ND	0.011	ND	0.62	ND	0.013	0.067	0.015	0.14	0.016	ND	0.015	ND	0.012	ND	0.014	ND	0.014	ND	0.014
Acrylonitrile	107-13-1			ND	0.01	ND	0.0099	ND	0.011	ND	0.62	ND	0.013	ND	0.015	ND	0.016	ND	0.015	ND	0.012	ND	0.014	ND	0.014	ND	0.014
Benzene	71-43-2	0.06	4.8	ND	0.001	ND	0.00099	ND	0.0011	0.035J	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Bromobenzene	108-86-1			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
Bromochloromethane	74-97-5			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
Bromodichloromethane	75-27-4			ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Bromoform	75-25-2			ND	0.0042	ND	0.0039	ND	0.0043	ND	0.25	ND	0.0051	ND	0.0061	ND	0.0065	ND	0.006	ND	0.0049	ND	0.0054	ND	0.0055	ND	0.0056
Bromomethane	74-83-9			ND	0.0021	ND	0.002	ND	0.0021	ND	0.12	ND	0.0025	ND	0.003	ND	0.0033	ND	0.003	ND	0.0024	ND	0.0027	ND	0.0027	ND	0.0028
Carbon disulfide	75-15-0			ND	0.01	ND	0.0099	ND	0.011	ND	0.62	ND	0.013	ND	0.015	ND	0.016	ND	0.015	ND	0.012	ND	0.014	0.0015J	0.014	ND	0.014
Carbon tetrachloride	56-23-5	0.76	2.4	ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Chlorobenzene	108-90-7	1.1	100	ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Chloroethane	75-00-3			ND	0.0021	ND	0.002	ND	0.0021	ND	0.12	ND	0.0025	ND	0.003	ND	0.0033	ND	0.003	ND	0.0024	ND	0.0027	ND	0.0027	ND	0.0028
Chloroform	67-66-3	0.37	49	ND	0.0016	ND	0.0015	ND	0.0016	ND	0.093	ND	0.0019	ND	0.0023	ND	0.0024	ND	0.0022	ND	0.0018	ND	0.002	ND	0.002	ND	0.0021
Chloromethane	74-87-3			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
cis-1,2-Dichloroethene	156-59-2	0.25	100	ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
cis-1,3-Dichloropropene	10061-01-5			ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Dibromochloromethane	124-48-1			ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Dibromomethane	74-95-3			ND	0.01	ND	0.0099	ND	0.011	ND	0.62	ND	0.013	ND	0.015	ND	0.016	ND	0.015	ND	0.012	ND	0.014	ND	0.014	ND	0.014
Dichlorodifluoromethane	75-71-8			ND	0.01	ND	0.0099	ND	0.011	ND	0.62	ND	0.013	ND	0.015	ND	0.016	ND	0.015	ND	0.012	ND	0.014	ND	0.014	ND	0.014
Ethyl ether	60-29-7			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
Ethylbenzene	100-41-4	1	41	ND	0.001	ND	0.00099	ND	0.0011	0.1	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Hexachlorobutadiene	87-68-3			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
Isopropylbenzene	98-82-8			ND	0.001	ND	0.00099	ND	0.0011	0.46	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Methyl tert butyl ether	1634-04-4	0.93	100	ND	0.0021	ND	0.002	ND	0.0021	ND	0.12	ND	0.0025	ND	0.003	ND	0.0033	ND	0.003	ND	0.0024	ND	0.0027	ND	0.0027	ND	0.0028
Methylene chloride	75-09-2	0.05	100	ND	0.01	ND	0.0099	0.0023J	0.011	ND	0.62	ND	0.013	ND	0.015	ND	0.016	ND	0.015	ND	0.012	ND	0.014	ND	0.014	ND	0.014
n-Butylbenzene	104-51-8	12	100	ND	0.001	ND	0.00099	ND	0.0011	1.5	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
n-Propylbenzene	103-65-1	3.9	100	ND	0.001	ND	0.00099	ND	0.0011	1.2	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Naphthalene	91-20-3	12	100	0.0014J	0.0053	ND	0.0049	ND	0.0053	0.4	0.31	ND	0.0064	ND	0.0076	0.00023J	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
o-Chlorotoluene	95-49-8			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
o-Xylene	95-47-6			ND	0.0021	ND	0.002	ND	0.0021	0.031J	0.12	ND	0.0025	ND	0.003	ND	0.0033	ND	0.003	ND	0.0024	ND	0.0027	ND	0.0027	ND	0.0028
p-Chlorotoluene	106-43-4			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
p-Diethylbenzene	105-05-5			ND	0.0042	ND	0.0039	ND	0.0043	0.83	0.25	ND	0.0051	ND	0.0061	ND	0.0065	ND	0.006	ND	0.0049	ND	0.0054	ND	0.0055	ND	0.0056
p-Ethyltoluene	622-96-8			ND	0.0042	ND	0.0039	ND	0.0043	0.057J	0.25	ND	0.0051	ND	0.0061	ND	0.0065	ND	0.006	ND	0.0049	ND	0.0054	ND	0.0055	ND	0.0056
p-Isopropyltoluene	99-87-6			ND	0.001	ND	0.00099	ND	0.0011	0.021J	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
p/m-Xylene	179601-23-1			ND	0.0021	ND	0.002	ND	0.0021	0.084J	0.12	ND	0.0025	ND	0.003	ND	0.0033	ND	0.003	ND	0.0024	ND	0.0027	ND	0.0027	ND	0.0028
sec-Butylbenzene	135-98-8	11	100	ND	0.001	ND	0.00099	ND	0.0011	0.88	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Styrene	100-42-5			ND	0.0021	ND	0.002	ND	0.0021	ND	0.12	ND	0.0025	ND	0.003	ND	0.0033	ND	0.003	ND	0.0024	ND	0.0027	ND	0.0027	ND	0.0028
tert-Butylbenzene	98-06-6	5.9	100	ND	0.0053	ND	0.0049	ND	0.0053	0.13J	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
Tetrachloroethene	127-18-4	1.3	19	ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Toluene	108-88-3	0.7	100	ND	0.0016	ND	0.0015	ND	0.0016	0.027J	0.093	ND	0.0019	ND	0.0023	ND	0.0024	ND	0.0022	ND	0.0018	ND	0.002	ND	0.002	ND	0.0021
trans-1,2-Dichloroethene	156-60-5	0.19	100	ND	0.0016	ND	0.0015	ND	0.0016	ND	0.093	ND	0.0019	ND	0.0023	ND	0.0024	ND	0.0022	ND	0.0018	ND	0.002	ND	0.002	ND	0.0021
trans-1,3-Dichloropropene	10061-02-6			ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
trans-1,4-Dichloro-2-butene	110-57-6			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
Trichloroethene	79-01-6	0.47	21	ND	0.001	ND	0.00099	ND	0.0011	ND	0.062	ND	0.0013	ND	0.0015	ND	0.0016	ND	0.0015	ND	0.0012	ND	0.0014	ND	0.0014	ND	0.0014
Trichlorofluoromethane	75-69-4			ND	0.0053	ND	0.0049	ND	0.0053	ND	0.31	ND	0.0064	ND	0.0076	ND	0.0082	ND	0.0075	ND	0.0061	ND	0.0068	ND	0.0068	ND	0.007
Vinyl acetate	108-05-4			ND	0.01	ND	0.0099	ND	0.011	ND	0.62	ND	0.013	ND	0.015	ND	0.016	ND	0.015	ND	0.012	ND	0.014	ND	0.014	ND	0.014
Vinyl chloride	75-01-4	0.02	0.9	ND	0.0021	ND	0.002	ND	0.0021	ND	0.12	ND	0.0025	ND	0.003	ND	0.0033	ND	0.003	ND	0.0024	ND	0.0027	ND	0.0027	ND	0.0028
Xylenes, Total	1330-20-7	0.26	100	ND	0.0021	ND	0.002	ND	0.0021	0.12J	0.12	ND	0.0025	ND	0.003	ND	0.0033	ND	0.003	ND	0.0024	ND	0.0027	ND	0.0027	ND	0.0028

Table 6B: Remaining Soil Sample Exceedance - Metals
Compounds Chappaqua Coal/Fuel Humble Oil Site
NYSDEC BCP Site Number: C360120

SAMPLE ID				B-1		B-2		B-3		B-4		B-5		B-6		B-7		B-8		B-9		B-10		B-11		SW-1		SW-2		SW-3	
SAMPLING DATE				9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017	
LAB SAMPLE ID				L1734138-04		L1734138-07		L1734138-08		L1734138-12		L1734138-13		L1734138-14		L1734138-11		L1734138-10		L1734138-09		L1734138-06		L1734138-05		L1734138-01		L1734138-02		L1734138-03	
SAMPLE LOCATION				Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Bottom Sample		Sidewall Sample - South		Sidewall Sample - South		Sidewall Sample - South	
SAMPLE DEPTH (ft.)				9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		9 - 10 ft.		10 - 15 ft.		4.5 - 5 ft.		4.5 - 5 ft.		10 - 15 ft.	
	CasNum	NY-UNRES	NY-RESRR	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
General Chemistry (%)																															
Solids, Total	NONE			84.8	0.1	83.3	0.1	91.4	0.1	81	0.1	80.4	0.1	82.4	0.1	69.7	0.1	73.6	0.1	80.8	0.1	73	0.1	81.7	0.1	91.6	0.1	52.4	0.1	57.4	0.1
Total Metals (mg/kg)																															
Aluminum, Total	7429-90-5			5610	9.32	3530	9.36	4600	8.59	8770	9.76	6750	9.81	11200	9.36	6530	11.2	5100	10.8	8990	9.53	7600	10.8	4910	9.76	6780	8.36	18200	15.1	7580	13.8
Antimony, Total	7440-36-0			ND	4.66	ND	4.68	ND	4.29	ND	4.88	ND	4.9	ND	4.68	ND	5.6	ND	5.39	ND	4.76	ND	5.39	ND	4.88	ND	4.18	ND	7.57	ND	6.89
Arsenic, Total	7440-38-2	13	16	4.3	0.93	0.823J	0.94	0.309J	0.86	3.26	0.98	2.01	0.98	1.68	0.94	3.72	1.12	1.02J	1.08	0.772J	0.95	2.82	1.08	1	0.98	0.468J	0.84	1.08J	1.51	2.34	1.38
Barium, Total	7440-39-3	350	400	59.2	0.93	35.9	0.94	81.9	0.86	63.2	0.98	50.8	0.98	187	0.94	58.5	1.12	48.8	1.08	93.1	0.95	68.5	1.08	45.3	0.98	21.8	0.84	219	1.51	120	1.38
Beryllium, Total	7440-41-7	7.2	72	ND	0.47	ND	0.47	ND	0.43	0.137J	0.49	0.167J	0.49	0.299J	0.47	0.045J	0.56	ND	0.54	ND	0.48	0.172J	0.54	ND	0.49	ND	0.42	0.212J	0.76	0.152J	0.69
Cadmium, Total	7440-43-9	2.5	4.3	0.578J	0.93	0.449J	0.94	0.283J	0.86	0.683J	0.98	0.559J	0.98	0.58J	0.94	0.772J	1.12	0.474J	1.08	0.543J	0.95	0.604J	1.08	0.302J	0.98	1.49	0.84	0.818J	1.51	0.758J	1.38
Calcium, Total	7440-70-2			1470	9.32	1140	9.36	853	8.59	2010	9.76	2080	9.81	1730	9.36	1980	11.2	2160	10.8	1990	9.53	1940	10.8	1010	9.76	8920	8.36	2190	15.1	3200	13.8
Chromium, Total	7440-47-3			25.5	0.93	13.7	0.94	14.2	0.86	35.1	0.98	15	0.98	20.1	0.94	19	1.12	15.4	1.08	36	0.95	20.2	1.08	19.9	0.98	0.961	0.84	54.6	1.51	23.3	1.38
Cobalt, Total	7440-48-4			5.8	1.86	4.8	1.87	4.15	1.72	9.56	1.95	6.62	1.96	12.5	1.87	8.4	2.24	5.92	2.15	8.81	1.9	7.05	2.16	5.9	1.95	14	1.67	14.4	3.03	9.43	2.76
Copper, Total	7440-50-8	50	270	16.8	0.93	8.94	0.94	11.7	0.86	23.9	0.98	16.4	0.98	7.49	0.94	18.1	1.12	16.6	1.08	15.8	0.95	22.9	1.08	12.3	0.98	97.8	0.84	12.5	1.51	24.1	1.38
Iron, Total	7439-89-6			12900	4.66	10300	4.68	6900	4.29	14900	4.88	10800	4.9	15500	4.68	16600	5.6	8990	5.39	11700	4.76	12200	5.39	7800	4.88	25100	4.18	16000	7.57	11400	6.89
Lead, Total	7439-92-1	63	400	7.84	4.66	1.9J	4.68	2.28J	4.29	6.47	4.88	8.72	4.9	8.34	4.68	5.48J	5.6	3.21J	5.39	3.45J	4.76	7.45	5.39	2.87J	4.88	3.35J	4.18	10.1	7.57	11.9	6.89
Magnesium, Total	7439-95-4			3840	9.32	1900	9.36	2560	8.59	5040	9.76	3300	9.81	3380	9.36	3700	11.2	2750	10.8	4410	9.53	3710	10.8	3140	9.76	6250	8.36	5200	15.1	3770	13.8
Manganese, Total	7439-96-5	1600	2000	83.1	0.93	93.3	0.94	59.6	0.86	128	0.98	87.2	0.98	220	0.94	104	1.12	93.8	1.08	108	0.95	128	1.08	68.8	0.98	285	0.84	203	1.51	138	1.38
Mercury, Total	7439-97-6	0.18	0.81	ND	0.07	ND	0.08	ND	0.07	ND	0.08	0.05J	0.08	0.03J	0.08	ND	0.09	ND	0.09	0.02J	0.08	ND	0.09	ND	0.08	ND	0.07	0.08J	0.12	0.03J	0.11
Nickel, Total	7440-02-0	30	310	19.7	2.33	20.4	2.34	17.4	2.15	37.8	2.44	15.4	2.45	15.8	2.34	24.8	2.8	16.4	2.69	33.6	2.38	31.5	2.7	17.2	2.44	8.78	2.09	50.1	3.79	48.9	3.44
Potassium, Total	7440-09-7			1530	233	385	234	1480	215	1150	244	829	245	791	234	1550	280	632	269	283	238	739	270	1310	244	411	209	714	379	513	344
Selenium, Total	7782-49-2	3.9	180	ND	1.86	ND	1.87	ND	1.72	ND	1.95	ND	1.96	ND	1.87	ND	2.24	0.733J	2.15	ND	1.9	ND	2.16	ND	1.95	ND	1.67	ND	3.03	ND	2.76
Silver, Total	7440-22-4	2	180	ND	0.93	ND	0.94	ND	0.86	ND	0.98	ND	0.98	ND	0.94	ND	1.12	ND	1.08	ND	0.95	ND	1.08	ND	0.98	ND	0.84	ND	1.51	ND	1.38
Sodium, Total	7440-23-5			157J	186	88.5J	187	149J	172	187J	195	88.6J	196	308	187	114J	224	154J	215	53.8J	190	147J	216	110J	195	1060	167	237J	303	167J	276
Thallium, Total	7440-28-0			ND	1.86	ND	1.87	ND	1.72	ND	1.95	ND	1.96	ND	1.87	ND	2.24	ND	2.15	ND	1.9	ND	2.16	ND	1.95	ND	1.67	ND	3.03	ND	2.76
Vanadium, Total	7440-62-2			20.9	0.93	15.7	0.94	14.2	0.86	32.8	0.98	19.4	0.98	21.7	0.94	22.1	1.12	24.2	1.08	31.1	0.95	24.9	1.08	19.7	0.98	78.6	0.84	43.3	1.51	25.3	1.38
Zinc, Total	7440-66-6	109	10000	26.2	4.66	19.5	4.68	17.9	4.29	49.5	4.88	50.1	4.9	35.6	4.68	39	5.6	29.5	5.39	54.2	4.76	53.6	5.39	22.8	4.88	37.5	4.18	93.9	7.57	59.7	6.89

* Comparison is not performed on parameters with non-numeric criteria.

Denotes concentrations above Unrestricted Use SCOs

Denotes concentrations above Restricted-Residential Use SCOs

Denotes laboratory Reporting Limit is higher than at least one of the comparison criteria.

ND: Not detected at the reported detection limit for the sample.

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 6B: Remaining Soil Sample Exceedance - Metals Compounds
Chappaqua Coal/Fuel Humble Oil Site
NYSDEC BCP Site Number: C360120

SAMPLE ID				SW-4		SW-5		SW-6		SW-7		SW-8		SW-9		SW-10		SW-11		SW-12		SW-13		SW-14		SW-15		SW-16	
SAMPLING DATE				10/13/2017		10/13/2017		10/13/2017		10/13/2017		10/13/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/22/2017		9/21/2017		9/21/2017		9/21/2017	
LAB SAMPLE ID				L1737162-05		L1737162-04		L1737162-03		L1737162-02		L1737162-01		L1734138-15		L1734138-16		L1734138-17		L1734138-18		L1734138-19		L1733883-03		L1733883-02		L1733883-01	
SAMPLE LOCATION				Sidewall Sample - West		Sidewall Sample - West		Sidewall Sample - West		Sidewall Sample - West		Sidewall Sample - West		Sidewall Sample - West		Sidewall Sample - North		Sidewall Sample - North		Sidewall Sample - North		Sidewall Sample - East		Sidewall Sample - East		Sidewall Sample - East		Sidewall Sample - East	
SAMPLE DEPTH (ft.)				4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.		4.5 - 5 ft.	
	CasNum	NY-UNRES	NY-RESRR	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
General Chemistry (%)																													
Solids, Total	NONE			90.6	0.1	86.4	0.1	90.5	0.1	93.7	0.1	85.4	0.1	89.2	0.1	86.7	0.1	74.6	0.1	69.5	0.1	75.8	0.1	76.9	0.1	83.1	0.1	84.4	0.1
Total Metals (mg/kg)																													
Aluminum, Total	7429-90-5			10300	8.55	6960	8.76	8290	8.63	7240	8.23	6920	9.01	11800	8.75	13600	9.1	10400	10.3	12700	11	15800	10.3	11800	10.2	7990	9.28	9440	9.26
Antimony, Total	7440-36-0			ND	4.27	ND	4.38	ND	4.32	ND	4.12	ND	4.51	ND	4.38	ND	4.55	ND	5.14	ND	5.5	ND	5.15	1.76J	5.1	2.61J	4.64	9.26	4.63
Arsenic, Total	7440-38-2	13	16	2.58	0.86	3.3	0.88	1.96	0.86	3.03	0.82	2.01	0.9	1.36	0.88	1.96	0.91	45	1.03	2.59	1.1	4.3	1.03	3.72	1.02	46.2	0.93	90.2	0.93
Barium, Total	7440-39-3	350	400	81.7	0.86	71.7	0.88	65.3	0.86	57.4	0.82	81.2	0.9	100	0.88	91.3	0.91	155	1.03	122	1.1	174	1.03	125	1.02	100	0.93	99.1	0.93
Beryllium, Total	7440-41-7	7.2	72	0.188J	0.43	0.105J	0.44	0.095J	0.43	0.148J	0.41	0.081J	0.45	ND	0.44	0.127J	0.46	0.175J	0.51	0.176J	0.55	0.206J	0.52	0.357J	0.51	0.316J	0.46	0.38J	0.46
Cadmium, Total	7440-43-9	2.5	4.3	0.889	0.86	0.57J	0.88	0.751J	0.86	1.17	0.82	0.82J	0.9	0.744J	0.88	0.8J	0.91	1.39	1.03	0.903J	1.1	1.33	1.03	ND	1.02	ND	0.93	ND	0.93
Calcium, Total	7440-70-2			22200	8.55	8110	8.76	11300	8.63	7950	8.23	16300	9.01	2210	8.75	6090	9.1	3820	10.3	2350	11	3000	10.3	2880	10.2	3560	9.28	4440	9.26
Chromium, Total	7440-47-3			21.1	0.86	16.8	0.88	14.4	0.86	8.11	0.82	13.3	0.9	42.6	0.88	31.7	0.91	35.7	1.03	38.9	1.1	48.6	1.03	36.1	1.02	26.4	0.93	31.5	0.93
Cobalt, Total	7440-48-4			7.79	1.71	6	1.75	8.64	1.73	11	1.65	8.97	1.8	9.74	1.75	9.54	1.82	8.37	2.06	10.7	2.2	11.9	2.06	9.33	2.04	7.69	1.86	8.55	1.85
Copper, Total	7440-50-8	50	270	24	0.86	25.1	0.88	46.2	0.86	85.6	0.82	56.7	0.9	30.8	0.88	21.6	0.91	65.5	1.03	58.3	1.1	55.8	1.03	42.7	1.02	90.4	0.93	102	0.93
Iron, Total	7439-89-6			15600	4.27	11400	4.38	15400	4.32	21100	4.12	16300	4.51	18100	4.38	18900	4.55	21100	5.14	16200	5.5	22800	5.15	19300	5.1	22800	4.64	23000	4.63
Lead, Total	7439-92-1	63	400	67.2	4.27	32.9	4.38	17.1	4.32	37.4	4.12	108	4.51	6.45	4.38	30.4	4.55	240	5.14	154	5.5	150	5.15	105	5.1	173	4.64	225	4.63
Magnesium, Total	7439-95-4			14200	8.55	5130	8.76	5930	8.63	5620	8.23	5960	9.01	6150	8.75	6240	9.1	4200	10.3	5110	11	5890	10.3	4960	10.2	4930	9.28	5700	9.26
Manganese, Total	7439-96-5	1600	2000	333	0.86	167	0.88	240	0.86	261	0.82	247	0.9	280	0.88	215	0.91	259	1.03	124	1.1	498	1.03	378	1.02	270	0.93	330	0.93
Mercury, Total	7439-97-6	0.18	0.81	0.067J	0.07	0.07	0.07	0.08	0.07	0.12	0.07	0.13	0.07	0.02J	0.07	0.09	0.07	0.54	0.09	0.57	0.09	0.8	0.08	0.62	0.08	0.37	0.08	0.33	0.08
Nickel, Total	7440-02-0	30	310	15.8	2.14	12.4	2.19	12.2	2.16	11	2.06	13.4	2.25	25.1	2.19	19.3	2.27	30	2.57	32.1	2.75	34.4	2.58	30.4	2.55	21.7	2.32	26.1	2.31
Potassium, Total	7440-09-7			1920	214	758	219	1710	216	699	206	1100	225	3060	219	2420	227	1500	257	1610	275	2510	258	1330	255	1830	232	1330	231
Selenium, Total	7782-49-2	3.9	180	ND	1.71	ND	1.75	ND	1.73	ND	1.65	ND	1.8	ND	1.75	ND	1.82	ND	2.06	ND	2.2	ND	2.06	0.836J	2.04	0.882J	1.86	1.11J	1.85
Silver, Total	7440-22-4	2	180	ND	0.86	ND	0.88	ND	0.86	ND	0.82	ND	0.9	ND	0.88	ND	0.91	ND	1.03	ND	1.1	ND	1.03	ND	1.02	ND	0.93	ND	0.93
Sodium, Total	7440-23-5			302	171	260	175	375	173	709	165	448	180	103J	175	286	182	310	206	109J	220	139J	206	89J	204	107J	186	84.3J	185
Thallium, Total	7440-28-0			ND	1.71	ND	1.75	ND	1.73	ND	1.65	ND	1.8	ND	1.75	ND	1.82	0.556J	2.06	ND	2.2	ND	2.06	ND	2.04	ND	1.86	ND	1.85
Vanadium, Total	7440-62-2			26.8	0.86	22.4	0.88	34.3	0.86	47.9	0.82	44.6	0.9	39.6	0.88	38.7	0.91	32.1	1.03	33.6	1.1	44.2	1.03	32.4	1.02	27.4	0.93	29.3	0.93
Zinc, Total	7440-66-6	109	10000	75.9	4.27	54.9	4.38	54.7	4.32	79.7	4.12	64.4	4.51	44	4.38	57.3	4.55	258	5.14	221	5.5	373	5.15	961	5.1	195	4.64	127	4.63

* Comparison is not performed on parameters with non-nume
Denotes concentrations above Ur
Denotes concentrations above Re
Denotes laboratory Reporting Limit is
ND: Not detected at the reported detection limit for the sample
NY-RESRR: New York NYCRR Part 375 Restricted-Residenti
NY-UNRES: New York NYCRR Part 375 New York Unrestrict

TABLE 7
Chappaqua Station LLC
54 Hunts Place, Chappaqua, NY
2012 RI Soil Vapor Sample Results Summary - Volatile Organic Compounds, Methane and Fixed Gases In Air

SampleID		NYSDEC DOH Air Guidance Values	SV-1 (3.5-4')		SV-2 (3-3.5')		SV-3 (3.5-4')		SV-4 (3.5-4')		SV-5 (3.5-4')		SV-6 (3.5-4')		SV-7 (3.5-4')		SV-8 (3.5-4')		SV-9 (3.5-4')		SV-10 (3.5-4')	
Lab ID			1204025-01A		1204025-02A		1204025-03A		1204025-04A		1204025-05A		1204025-06A		1204025-07A		1204025-08A		1204025-09A		1204025-10A	
Sampling Date			3/28/2012		3/28/2012		3/28/2012		3/28/2012		3/28/2012		3/28/2012		3/28/2012		3/29/2012		3/29/2012		3/29/2012	
DilutionFactor			2.98		1.52		3.04		1.55		5.17		1.55		2.98		1.61		16.1		1.61	
ClientMatrix			Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor	
RptUnits																						
Compound	**CASNumber**		**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organics (TO-15 Analysis)		mcg/m^3	mcg/m^3		mcg/m^3		mcg/m^3		mcg/m^3		mcg/m^3		mcg/m^3		mcg/m^3		mcg/m^3		mcg/m^3		mcg/m^3	
Freon 12	75-71-8	~	8		4.3		ND		ND		12		ND		ND		ND		ND		5.2	
Freon 114	76-14-2	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloromethane	74-87-3	~	ND		ND		ND		ND		ND		ND		1.1		ND		ND		ND	
Vinyl Chloride	75-01-4	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,3-Butadiene	106-99-0	~	ND		ND		ND		ND		ND		ND		12		ND		16		6.9	
Bromomethane	74-83-9	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chlorethane	75-00-3	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Freon 11	75-69-4	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		5.2	
Ethanol	64-17-5	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Freon 113	76-13-1	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethene	75-35-4	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Acetone	67-64-1	~	480	E	240	E	410		270		220		720		520	E	590		6300	E	360	E
2-Propanol	67-63-0	~	ND		2.9		ND		ND		ND		ND		4		ND		1800	E	2.3	
Carbon disulfide	75-15-0	~	26		24		ND		ND		ND		ND		30		54		120		93	
3-Chloropropene	107-05-1	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methylene Chloride	75-09-2	60	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
MTBE	1634-04-4	~	ND		0.66		ND		ND		ND		ND		ND		ND		ND		ND	
trans-1,2-Dichloroethene	156-60-5	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexane	110-54-3	~	260		64		1700		1200		130		4100		35		270		88		22	
1,1-Dichloroethane	75-34-3	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Butanone (MEK)	78-93-3	~	ND		23		ND		ND		ND		ND		19		ND		270		4.4	
cis-1,2-Dichloroethene	156-59-2	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Tetrahydrofuran	109-99-9	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloroform	67-66-3	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,1-Trichloroethane	71-55-6	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Cyclohexane	110-82-7	~	33		100		9500		2000		310		8600		60		12000		360		17	
Carbon Tetrachloride	540-84-1	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,2,4-Trimethylpentane	56-23-5	~	240		310	E	ND		ND		ND		ND		390		5300		550		13	
Benzene	71-43-2	~	34		12		91		52		7.2		53		11		240		15		5	
1,2-Dichloroethane	107-06-2	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Heptane	142-82-5	~	100		85		3700		850		270		10000		53		ND		130		23	
Trichloroethene	79-01-6	5	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloropropane	78-87-5	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dioxane	123-91-1	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromodichloromethane	75-27-4	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,3-Dichloropropene	10061-01-5	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Methyl-2-pentanone	108-10-1	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Toluene	108-88-3	~	180		89		100		130		57		130		86		120		81		46	
trans-1,3-Dichloropropene	10061-02-6	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2-Trichloroethane	79-00-5	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Tetrachloroethene	127-18-4	100	5.7		5.5		ND		ND		4.5		ND		7.6		ND		ND		4.9	
2-Hexanone	591-78-6	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dibromochloromethane	124-48-1	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromoethane	106-93-4	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chlorobenzene	108-90-7	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Ethyl Benzene	100-41-4	~	26		28		350		39		19		2100		27		65		35		16	
m,p-Xylene	108-38-3/106-42-3	~	58		75		120		120		62		120		87		120		110		56	
o-Xylene	95-47-6	~	15		20		ND		ND		15		69		20		35		46		13	
Styrene	100-42-5	~	1.5		1.8		ND		ND		ND		ND		2.1		ND		ND		1.4	
Bromoform	75-25-2	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Cumene	98-82-8	~	3.9		8		300		ND		ND		860		2		490		ND		0.89	
1,1,2,2-Tetrachloroethane	79-34-5	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
n-Propylbenzene	103-65-1	~	3.8		9.6		160		ND		6.5		550		6		240		10		3.8	
p-Ethyltoluene	622-96-8	~	13		24		ND		ND		18		42		23		ND		38		17	
1,3,5-Trimethylbenzene	108-67-8	~	1.7		4.1		ND		ND		3.8		ND		2.8		ND		9.1		2.3	
1,2,4-Trimethylbenzene	95-63-6	~	6.3		17		ND		ND		13		250		14		ND		18		11	
1,3-Dichlorobenzene	541-73-1	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dichlorobenzene	106-46-7	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
alpha-Chlorotoluene	100-44-7	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichlorobenzene	95-50-1	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trichlorobenzene	120-82-1	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexachlorobutadiene	87-68-3	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

SampleID		Composition of Pure Air in Atmospheric Chemistry*	SV-1 (3.5-4')		SV-2 (3-3.5')		SV-3 (3.5-4')		SV-4 (3.5-4')		SV-5 (3.5-4')		SV-6 (3.5-4')		SV-7 (3.5-4')		SV-8 (3.5-4')		SV-9 (3.5-4')		SV-10 (3.5-4')	
Lab ID			1204025-01A		1204025-02A		1204025-03A		1204025-04A		1204025-05A		1204025-06A		1204025-07A		1204025-08A		1204025-09A		1204025-10A	
Sampling Date			3/28/2012		3/28/2012		3/28/2012		3/28/2012		3/28/2012		3/28/2012		3/28/2012		3/29/2012		3/29/2012		3/29/2012	
DilutionFactor			2.98		1.52		1.52		1.55		1.55		1.55		1.49		1.61		1.61		1.61	
ClientMatrix			Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor		Soil Vapor	
RptUnits																						
Compound	**CASNumber**		**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Methane and Fixed Gases in Air (ASTM D-1946 Analysis)		% (by volume)	% (by volume)		% (by volume)		% (by volume)		% (by volume)		% (by volume)		% (by volume)		% (by volume)		% (by volume)		% (by volume)		% (by volume)	
Oxygen	7782-44-7	20.946	12		2		3.8		4		1.4		2.4		3.3		3.1		1.3		4.2	
Nitrogen	7727-37-9	78.084	77		84		96		87		91		74		84		59		90		87	
Carbon Monoxide	630-08-0	0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methane	74-82-8	0.00016	11		12		0.3		8.4		6.3		18		5.8		33		4.5		0.00074	
Carbon Dioxide	124-38-9	0.033	0.16		2.3		0.13		0.55		1.5		5.5		6.6		4.7		4.6		8.3	
Ethane	74-84-0	0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Ethene	74-85-1	0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

NOTES:
mcg/m^3: micrograms per cubic meter
%: Percent by volume
~: No standard
Follows Decision Matrix 1 in NYSDOH Guidance Document
ND: Not Detected
Follows Decision Matrix 2 in NYSDOH Guidance Document
E: Concentration exceeds instrument calibration range
* IUPAC Compendium of Chemical Terminology, Second Edition, 1997